RECLAMATION

Managing Water in the West

Draft Environmental Assessment

Marina Coast Water District Regional Urban Recycled Water Project

EA-06-23

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List of Tables and Figures

List of Acronyms, Abbreviations, and Definition of Terms

AFY.....Acre Feet per Year
APE.....Area of Potential Effect
Army .....U.S. Army
BA.....Biological Assessment
BO.....Biological Opinion
BMPs.....Best Management Practices
CAA .....Clean Air Act
Cal-Am.....California-American Water Company
CARB.....California Air Resources Board
CDFG.....California Department of Fish & Game
CEQA.....California Environmental Quality Act
CFCs .....Chlorofluorocarbons
CH_4.....Methane
CNDDB.....California Natural Diversity Database
CNEL .....Community Noise Equivalent Level
CNPS.....California Native Plant Society
CO.....Carbon monoxide
CO_2.....Carbon dioxide
CO_2e.....Carbon dioxide equivalents
CSUMB.....California State University, Monterey Bay
CTS .....California Tiger Salamander
dB.....decibel
dBA.....A-weighted sound level
DD&A.....Denise Duffy & Associates, Inc.
EA .....Environmental Assessment
EIR.....Environmental Impact Report (CEQA)
EIS.....Environmental Impact Statement (NEPA)
EPA.....Environmental Protection Agency
ESA.....Endangered Species Act
FONSI.....Finding of No Significant Impact
Habitat Management Plan.....Installation-Wide Multispecies Habitat Management Plan for the Former Fort Ord, California.
hp .....horsepower
Hz.....Hertz
IPCC.....Intergovernmental Panel on Climate Change
IS.....Initial Study
ITA.....Indian Trust Assets
kWh.....Kilowatt hour
lbs.....pounds
L_{dn} .....Day-Night Noise Level Scale
L_{eq}.....average equivalent sound level
M&I.....Municipal and Industrial
MBTA.....Migratory Bird Treaty Act
MCWD.....Marina Coast Water District
MCWRA.....Monterey County Water Resources Agency
MGD .....million gallons per day

MMRP.....Mitigation Monitoring and Reporting Program
MND .....Mitigated Negative Declaration
Monterey Air District.....Monterey Bay Unified Air Pollution Control District or MBUAPCD
MT.....Metric Tons
N_2O .....Nitrous oxide
NAAQS.....National Ambient Air Quality Standards
National Register .....National Register of Historic Places
NCCAB.....North Central Coast Air Basin
NEPA .....National Environmental Policy Act
NHPA.....National Historic Preservation Act
NMFS.....National Oceanic and Atmospheric Administration National Marine Fisheries Service
NO_x .....Nitrogen oxides
NPDES.....National Pollutant Discharge Elimination System
O_3 .....Ozone
PM_{10} .....Particulate matter less than 10 microns in diameter
$PM_{2.5}$ .....Particulate matter less than 2.5 microns in diameter
Pollution Control Agency .....Monterey Regional Water Pollution Control Agency
ppm .....parts per million
ppmw.....parts per million by weight
RBF.....RBF Consulting
Reclamation .....Bureau of Reclamation, U.S. Department of Interior
Reclamation Plant .....Salinas Valley Reclamation Plant
Reclamation Project.....Salinas Valley Reclamation Project
Reuse Authority .....Fort Ord Reuse Authority
Reuse Plan.....Fort Ord Reuse Plan
ROG .....Reactive Organic Gases (also referred to as VOC or Volatile Organic Compounds)
ROW .....Right-of-way
RUWAP .....Regional Urban Water Augmentation Project (included comprehensive technical advisory committee process and alternatives analysis to develop 3,000 AFY water supply projects, and conceptual engineering design for three key alternatives)
RWP.....Regional Urban Recycled Water Project (the Proposed Action)
SIP.....State Implementation Plan
SF_6.....Sulfur hexafluoride
SO_2 .....Sulfur dioxide
SWRCB.....State Water Resources Control Board
TAC.....Technical Advisory Committee
TACs.....Toxic Air Contaminants
$\mu g/m^3$.....micrograms per cubic meter
USFWS .....United States Fish & Wildlife Service
UWMP or Plan.....Urban Water Management Plan
WAPP .....Water Augmentation Pumping Plant
Water Management District...Monterey Peninsula Water Management District
yr .....year

Section 1 Purpose and Need for Action

1.1 Background

Seawater intrusion in the Salinas Valley Groundwater Basin has been documented since the 1930's. Seawater intrusion occurs when the naturally occurring offshore flow of fresh groundwater in a coastal aquifer is reversed and seawater begins moving inland. The flow reversal occurs when onshore groundwater levels are consistently below sea level as a result of extractions (i.e., cumulative pumping from wells). Regionally, water levels can drop below sea level as a result of extractions that exceed the recharge to the aquifer. On a local scale, water levels can drop below sea level because of well operations and specific aquifer properties. In the Pressure Subarea of the Salinas Valley Groundwater Basin, the flow reversal allowing seawater intrusion is the result of both processes. The Marina Coast Water District (MCWD) and the agricultural and municipal users throughout the Salinas Valley Groundwater Basin rely on wells that extract water from the basin as their primary water supply source in accordance with agreements with the Monterey County Water Resources Agency.

The Salinas Valley Reclamation Plant (Reclamation Plant) was originally developed to provide recycled water for agricultural purposes and was funded by the Bureau of Reclamation (Reclamation), the State Water Resources Control Board (SWRCB), and the Monterey County Water Resources Agency. On June 2, 1995, a contract was made between Reclamation and the Monterey Regional Water Pollution Control Agency (Pollution Control Agency) to set terms for a loan from Reclamation to the Pollution Control Agency to allow development of water facilities associated with the Salinas Valley Seawater Intrusion Program and Salinas Valley Reclamation Project (Reclamation Project).

In 2002, in cooperation with the Fort Ord Reuse Authority (Reuse Authority), MCWD initiated the Regional Urban Water Augmentation Project (RUWAP). The RUWAP was a programmatic evaluation of water supply alternatives in order to identify feasible water augmentation supplies capable of meeting the water demands for redevelopment of the former Fort Ord as anticipated by the Fort Ord Reuse Plan (Reuse Plan) and its accompanying Final Environmental Impact Report (EIR). The amount of groundwater currently available from the Salinas Valley Ground Water Basin for MCWD to use at the former Fort Ord is limited to 6,600 acre-feet per year (AFY) pursuant to the Annexation Agreement of Fort Ord. The Reuse Plan anticipates that a total of 9,000 AFY would be needed to provide water for redevelopment of the former Fort Ord; therefore, a balance of 2,400 AFY of water is needed to augment the 6,600 AFY of available groundwater. The RUWAP's key objective is to provide 2,400 AFY of water to meet anticipated demands in the former Fort Ord area. An additional 300 AFY of water is planned to supply the

Monterey Peninsula, and 300 AFY of water is being considered to supply MCWD's other service areas. Therefore, an additional 3,000 AFY is needed to meet RUWAP project objectives.

A multi-tiered alternatives analysis was conducted as described in the RUWAP Alternatives Analysis (MCWD/Denise Duffy & Associates [DD&A]/RBF Consulting [RBF], March 2003). The analysis found that the two most viable alternatives that could be implemented by the MCWD were Seawater Desalination and Recycled Water. Consequently, an EIR was prepared by MCWD for the primary alternatives: a 3,000 AFY Recycled Water Alternative and a 3,000 AFY Seawater Desalination Alternative. Further, three additional alternatives, including a Hybrid Alternative (a combination of recycled water and seawater desalination), were also evaluated. The *Draft Environmental Impact Report Regional Urban Water Augmentation Project*, State Clearinghouse Number #2003081142 (MCWD 2004a); was prepared by MCWD pursuant to the California Environmental Quality Act (CEQA) and was released in June 2004. A Final EIR was certified in October 2004 (hereafter referred to as the "RUWAP EIR"), and the RUWAP Plan was approved in May 2005. As part of the RUWAP approval, MCWD and the Reuse Authority identified the Hybrid Alternative as the recommended alternative to satisfy the RUWAP objectives.

In 2004, MCWD and the Pollution Control Agency also completed the Regional Urban Recycled Water Distribution Project, a joint investigation, which determined that up to 1,727 AFY could be provided for urban uses without the need for seasonal storage (MCWD/Pollution Control Agency/RBF, 2003). The remaining 1,273 - 1,500 AFY, depending upon demand for recycled water, could be provided by seawater desalination.

MCWD, in cooperation with the Pollution Control Agency, has proposed the Regional Urban Recycled Water Project (RWP), which entails the construction of a distribution system to provide up to 1,727 AFY of recycled water from the existing Pollution Control Agency's Reclamation Plant to urban users. This recycled water would be delivered initially to the former Fort Ord (Ord Community), which includes lands within the jurisdictions of the Cities of Marina, Seaside, and Del Rey Oaks; California State University, Monterey Bay (CSUMB); University of California, Monterey Bay Education, Science, and Technology Center; and the County of Monterey. Of the total 1,727 AFY, 300 AFY of recycled water would be provided to the Monterey Peninsula (outside of the former Fort Ord) (Figure 1) once that portion of the distribution system is operational.

Section 10(b) of the contract between Reclamation, SWRCB, and the Monterey County Water Resources Agency (MCWRA) stipulates that recycled water for municipal and industrial (M&I) uses can only be delivered after compliance with the National Environmental Policy Act (NEPA) and other federal regulations (U.S. Department of Interior, 1995). Under these conditions, this

Environmental Assessment (EA) has been prepared with Reclamation as the NEPA lead agency and MCWD as a cooperating agency.

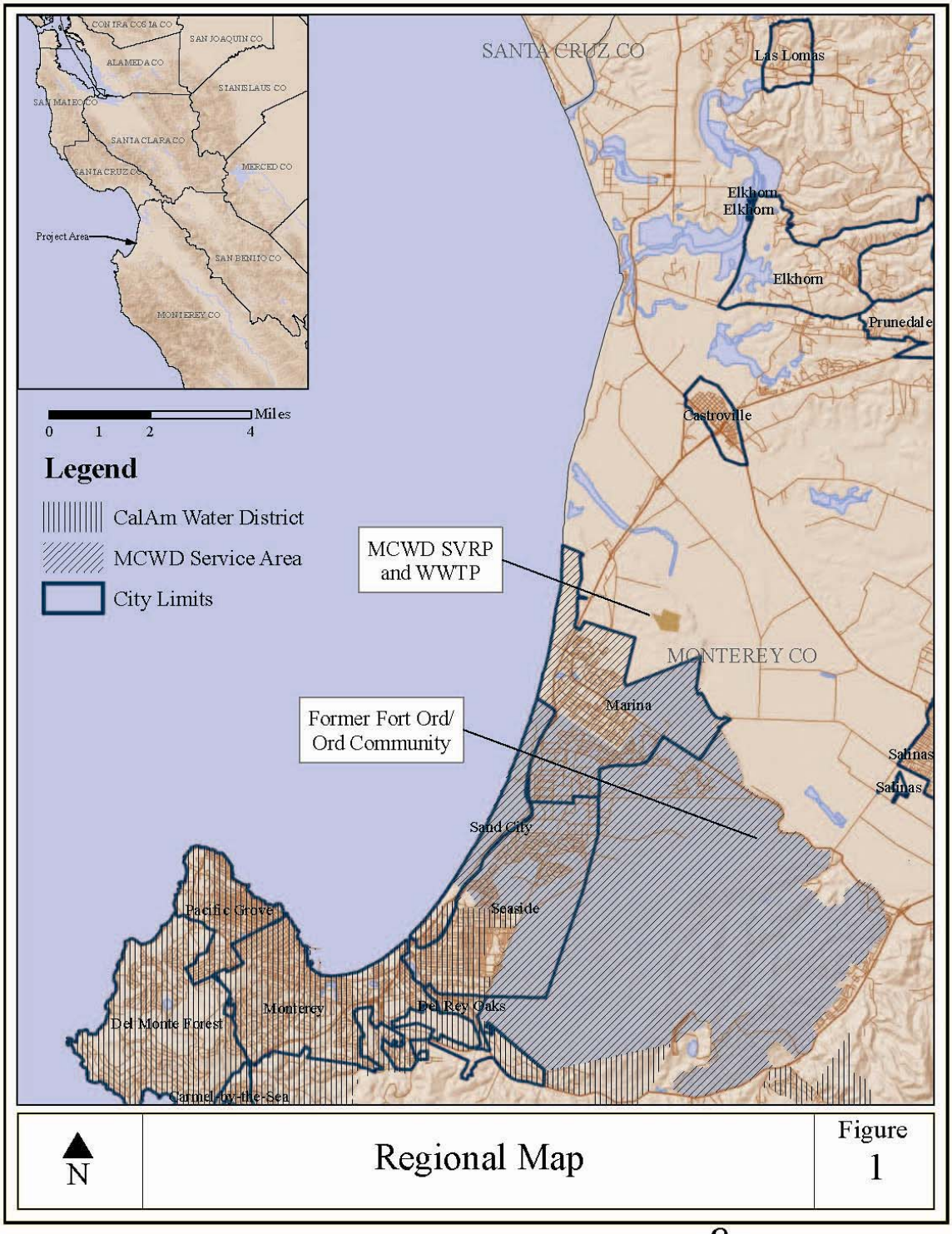
1.2 Development of the Proposed Action Alternative

The recycled water portion of the RUWAP Hybrid Alternative, the RWP, is the Proposed Action analyzed in this EA. The action is subject to the June 2, 1995, contract between Reclamation and the Pollution Control Agency that requires NEPA compliance (see Section 10(b) of the agreement). The desalination component of the RUWAP Hybrid Alternative is briefly described in this EA only to the extent that it is part of the program of projects envisioned by the RUWAP EIR and may provide a potential alternative water supply in the event that the RWP is not built and operated. At this time, a future seawater desalination project is not expected to require federal agency approval or funding and, thus, is not subject to NEPA review.

1.3 Purpose and Need

Reclamation provided a loan in 1995 to the Pollution Control Agency for construction of the Reclamation plant. As required under the contract, any changes from agriculture water to M&I water requires additional environmental review and approval by Reclamation. The purpose of the Proposed Action is for Reclamation to review and approve the change from irrigation to M&I uses under this contract.

The Proposed Action is needed to satisfy a regional water demand of up to approximately 1,727 AFY by recycled water delivery to the Ord Community service area and the Monterey Peninsula. The purpose of the Proposed Action for MCWD and Pollution Control Agency is to provide a portion of water augmentation demands for redevelopment of the former Fort Ord as anticipated by the Reuse Plan and its accompanying Final EIR, as well as augmenting water supplies to the Monterey Peninsula. The Proposed Action would also be consistent with recycled water policies and objectives identified in the various Ord Community jurisdictions' land use planning documents (i.e., to optimize use of recycled water as an alternative to potable water).



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1.4 Applicable Regulatory Requirements and Required Coordination

Several laws and policy requirements have directed, limited, or guided the decision-making process for this EA and include the following documents, which are incorporated by reference and summarized below. The documents are available for review at MCWD offices located at 11 Reservation Road, Marina, California.

- CSUMB. *Categorical Exemption for the* Combined Central Heat and Power *Plant and Infrastructure Upgrade Project*. April 2005; DD&A, *Site Surveys.* March 31 – April 1, 2005. This Notice of Exemption and its supporting site surveys have been used by the RUWAP EIR (via Addendum No. 1) and this EA to document the biological resources and the impacts of vegetation disturbance of the RWP, specifically, the portion of the recycled water trunk pipeline between the southernmost end of 5th Avenue and General Jim Moore Boulevard on the CSUMB campus.

- FORA. *Fort Ord Reuse Plan & Elements and EIR.* 1997. This document analyzes the growth inducement, population housing, and other indirect impacts of supply of new water resources (specifically, up to 2,400 AFY) to the Ord Community service area.

- Land/Marine Geotechnics. *Preliminary Geotechnical Investigation Marina Coast Water District Regional Urban Water Augmentation Project 30% Design.* Marina, CA. This document presents the assumptions, scope, and results of the preliminary geotechnical investigation for the 30% Design of the Proposed Action, including only those project components within the City of Marina and the Ord Community Service Area of MCWD.

- MCWD. *Final Urban Water Management Plan.* December 2005. The State of California requires all urban water suppliers serving more than 3,000 customers or providing more than 3,000 acre-feet of water annually to develop an Urban Water Management Plan (UWMP or Plan) (California Water Code, Division 6, Part 2.6.) MCWD has adopted an UWMP (December 2005) that includes an estimate of the water demand by land use.

- MCWD/DD&A/RBF Consulting. *Marina Coast Water District Regional Urban Water Augmentation Project Alternatives Analysis.* March 2003. The RUWAP Alternatives Analysis described and evaluated 29 potential water supply alternatives to meet project objectives and recommended two of the most viable water augmentation alternatives that could be implemented by the MCWD: Seawater Desalination and Recycled Water.

- MCWD/DD&A/RBF Consulting. *Marina Coast Water District Regional Urban Water Augmentation Project Engineering Feasibility Study*. August 2003. This document provides the preliminary engineering information for the RUWAP projects, including the 3,000 AFY recycled water and desalination alternatives, in addition to the hybrid alternative.

- MCWD/DD&A/Martin Feeney. *Groundwater Status and Inventory Report.* March 2004. This document summarizes the groundwater conditions, issues, and constraints to which MCWD is subject. The document provides the environmental setting information pertinent to all groundwater issues.

- MCWD/DD&A. *Certified Final EIR for the Marina Coast Water District Regional Urban Water Augmentation Project (including the Draft dated June 2004), State Clearinghouse #2003081142.* October 2004. This document provides the CEQA environmental review document for the overall RUWAP. Specifically, MCWD prepared an EIR and evaluated the primary alternatives: a 3,000 AFY Recycled Water Alternative and a 3,000 AFY Seawater Desalination Alternative. In addition, three additional alternatives, including a Hybrid Alternative (1,500 AFY Recycled Water and 1,500 AFY Seawater Desalination) were evaluated in Section 6, Alternatives, of the RUWAP EIR. The Hybrid Alternative considered a water supply of up to 1,500 AFY from an expansion of MCWD's seawater desalination plant (including replacement of the existing 300 AFY capacity plant) and the production and distribution of up to 1,500 AFY of recycled water for urban irrigation uses. The Hybrid Alternative, of which the RWP is a component, was subsequently selected as the preferred project.

- MCWD/DD&A. *MCWD Tanks D/E Improvement Project EA / Initial Study (IS) (Negative Declaration adopted by the MCWD Board on July 26, 2006).* July 2006. The site for the storage tank is currently under construction for a new separate potable water tank. More information on the existing biological, aesthetic, and visual conditions of the Blackhorse Reservoir site and the impacts of construction of a tank at that site can be found in the MCWD Tanks D/E Improvement Project EA/IS by MCWD (MCWD 2006).[1] The MCWD Tanks D/E project is preparing (i.e., grading and paving) the entire site in anticipation of use of a portion of the site for the recycled water tank proposed by this project.

[1] Negative Declaration adopted by the MCWD Board on July 26, 2006.

1.5 Potential Issues

The following key issues have been identified and are addressed in detail in Sections 3 and 4 of this EA:

- Air Quality
- Biological Resources
- Cultural Resources
- Environmental Justice
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Indian Trust Assets
- Land Use and Planning
- Noise
- Water Supply
- Wastewater

Section 2 Alternatives Including Proposed Action

2.1 No Action Alternative

The No Action Alternative would involve the continuation of MCWD's existing operation and no development of an augmentation supply for either the Ord Community or, as applicable, the Monterey Peninsula. This alternative would provide no additional water beyond the existing limitations on water supply sources, specifically the 6,600 AFY of groundwater for the Ord Community and the existing 300 AFY desalination facility at the MCWD. This alternative would supply no additional recycled water to the region and have no required construction; therefore, none of the effects of the Proposed Action would result. Although the RWP would not be built, this alternative would not preclude development of the other RUWAP project, the 1,500 AFY seawater desalination project. This EA does not address that project or evaluate its environmental effects because it would not require federal agency approval or funding; therefore the desalination project is not subject to NEPA review.

It is possible that without the RWP, the RUWAP objective of providing an additional 3,000 AFY would still be met by construction and implementation by MCWD of an entirely potable water supply. In this case, the proposed seawater desalination facility (currently planned as no more than 1,500 AFY under the Hybrid Alternative) would be increased to 3,000 AFY. This would involve the increase in capacity of the potential seawater desalination component of the RUWAP from approximately 1,500 to 3,000 AFY. Therefore, additional seawater intake and brine discharge facilities would be necessary. As documented in the RUWAP EIR alternatives analysis (see EIR at Section 6), the seawater desalination component of the hybrid alternative would require a total of four radial-arm wells, two for collection and two for discharge of brine. This alternative assumes that a 1,500 AFY seawater desalination facility would already be constructed at the site of the existing MCWD desalination plant and offices on Reservation Road near Marina State Beach. Increasing the capacity of that plant to 3,000 AFY would require additional project components and operational activities.

A description and analysis of a 3,000 AFY seawater desalination alternative was provided in the RUWAP EIR and is hereby incorporated by reference into this EA.

2.2 Proposed Action

Due to the nature of the Proposed Action as a water supply project, necessary infrastructure improvements to existing water systems are included in the description. Water supplies would be provided if and only if adequate entitlements, infrastructure, and the required treatment (per

federal and state standards) are included in the design, construction, and operation of the RWP. Reclamation's action would be to approve a contract for allowing delivery of Recycled Water from the Reclamation Plant to M&I land uses as is proposed by the MCWD's RWP. Specifically, the Contract No. 5-07-20-W1284 between Reclamation and Pollution Control Agency states under Section 10(a) that until the loan obligation granted to the Pollution Control Agency by Reclamation is fully repaid, the Pollution Control Agency cannot provide water from the Reclamation Project facilities for any use other than as Irrigation Water (defined as "water which is made available and used primarily in the production of agricultural crops, including domestic uses incidental thereto") except as provided in subsequent sections of the agreement. Specifically, Section 10 (b) of the above-reference contract states that the Reclamation Project "water may be delivered, on a temporary or long term basis, for use as M&I water within or outside of the Project Service Area only after the appropriate environmental reviews and compliance actions have been completed, including but not limited to, compliance with the National Environmental Policy Act and the Endangered Species Act [ESA]." The contract also defines how the loan would be reallocated to accommodate the delivery of M&I water.

Except as delegated to Pollution Control Agency through the Revised Memorandum of Understanding between MCWD and the Pollution Control Agency for the RUWAP (dated June 2009), MCWD is solely responsible for all construction, operations, and maintenance of the RWP. Reclamation has authority to approve recycled water for M&I use under the contract with the Pollution Control Agency but Reclamation has no authority to direct MCWD's actions or operations.

2.2.1 RWP Components

The RWP includes the following facility components:

- Connection to the Reclamation Plant facility, including one pump station and pipelines at that site;
- A new distribution system consisting of approximately 127,000 linear feet of 4- to 20-inch diameter main and lateral pipelines, as well as pressure reducing valves and appurtenances throughout the region;[2]
- One storage tank located at an existing District water storage tank site near the intersection of Eucalyptus Road and Parker Flats Cutoff in the Ord Community; and
- One pump station located at 3rd Street and 5th Avenue in the City of Marina.

The proposed pipelines are shown in Figure 2. The pipelines would follow an alignment along primarily major roadways and through some major intersections within roadway rights-of-way (ROW) within residential and commercial areas with the exception of four pipeline alignment

[2] Approximately 97,000 linear feet would be within the Ord Community Service Area and approximately 30,000 linear feet would be outside MCWD's service areas (i.e., within California-American Water Company's (Cal-Am) Monterey Service Area).

portions: 1) the alignment from the proposed Reclamation Plant pump station to the Reclamation Plant property boundary; 2) the alignment from the Reclamation Plant boundary to Crescent Avenue within Armstrong Ranch; 3) the portion that falls within the boundaries of CSUMB (from 3rd Street to General Jim Moore Boulevard); and 4) the alignments near Blackhorse Reservoir site (beginning south of Marshall School on Normandy Road to Ardennes Circle ROW and from there to the intersection of Parker Flats Cutoff and Eucalyptus Road). Portions of pipeline that are already constructed or are currently under construction are shown in blue as "Existing Pipe" in Figure 2.

Two pump stations would be installed to provide pressure in the recycled water pipeline. The service pump station would be installed at the Reclamation Plant site (hereafter, the Water Augmentation Pumping Plant [WAPP]). The booster station would be installed at the City of Marina Corporation Yard near the intersection of 3rd Street and 5th Avenue. The location of the City of Marina's corporation yard is shown on Figure 2. The WAPP would include up to three pumps rated at 250 horsepower (hp) and a smaller jockey pump rated at 50 hp. The booster pump would have three pumps each rated at 250 hp.

The proposed WAPP would be mounted on a slab on grade, approximately 120-feet long and 19-feet to 33-feet wide. Electrical/control panels would be housed in a prefabricated enclosure, approximately 40 feet by 12 feet in size. In addition, a 3,360 kilovolt amperes transformer would be mounted on an approximately 18-foot long, 21-foot wide slab on grade, adjacent to the electrical building. Finally, a pad supporting the metering load and interrupter switch would be installed near the transformer site. The pad would be approximately 23 feet by 21 feet in size. The total development footprint for the WAPP would be is approximately 0.03 acre. No new back-up power generation is proposed for this station.

The booster pump station in Marina would be located on MCWD property that is currently paved. The pump station would be housed in a building up to 20 feet in height. The footprint for the booster pump station would be approximately 0.03 acre.

Operational storage would be provided by a new reservoir (currently referred to as "Blackhorse Reservoir"), a steel tank with a capacity of 1.5 million gallons to be located east of General Jim Moore Boulevard at an existing District water storage tank site (see Figure 2). The tank would be up to 100 feet in diameter and up to 25 feet in height.

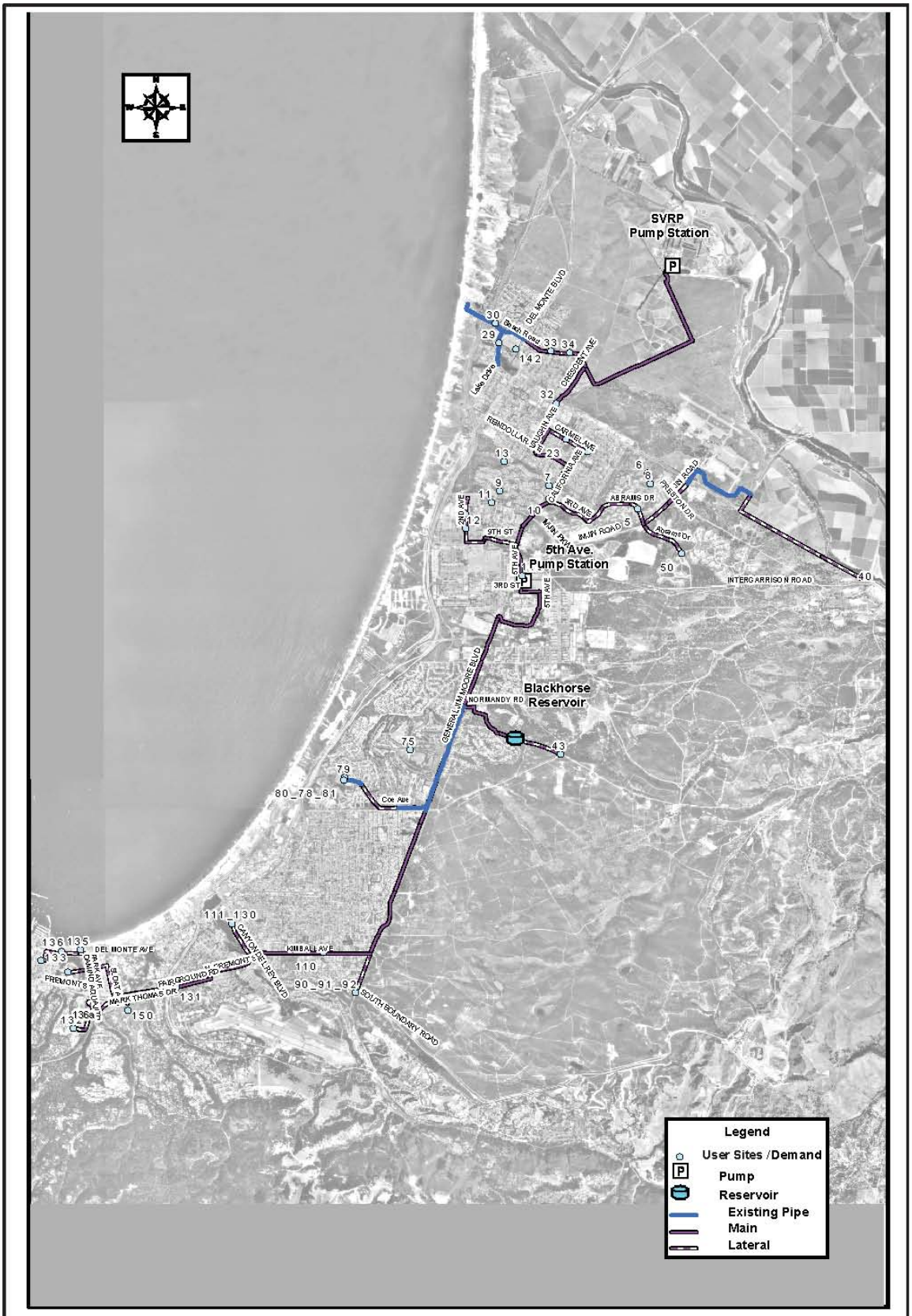

Figure 2
MCWD Regional Urban Recycled Water Project Components

2.2.2 Recycled Water Users

The recycled water system would potentially serve many existing and new water users within the Ord Community (as previously defined), City of Marina (outside the Ord Community), and the Monterey Peninsula (defined as the California-American Water Company's [Cal-Am] Monterey Division service area). Existing users' irrigation systems would be disconnected from the potable water system and would tie directly into the new recycled water system. Cross-connection testing would be performed at all facilities in accordance with California regulations. New users would connect their irrigation systems directly to the recycled water main. The system would be designed to provide water at a minimum pressure of 40 pounds per square inch. New on-site retrofit of existing systems and facilities that would be required at the user sites is not evaluated herein but are assumed to be designed and constructed in accordance with applicable health, safety, and water resources standards, including but not limited to Titles 17 and Title 22 of the California Code of Regulations, the California Porter Cologne Water Quality Control Act, and the federal Clean Water Act. Future users of the recycled water would enter into user agreements and/or be provided a user handbook detailing proper use of the recycled water, in accordance with the requirements of the California Department of Public Health. In addition, MCWD has a recycled water ordinance (Title 4. Recycled Water, Chapter 4.28 Recycled Water) which indicates requirements of future recycled water users. The list of potential recycled water user sites continues to fluctuate based on redevelopment plans of the local jurisdictions. At this time, existing and future new users have not agreed to connect with the recycled water system; therefore, connection or retrofit activities cannot be accurately defined. If the connections and retrofitting activities would result in a direct physical change that may have an adverse effect (or a significant impact) on the environment or are considered major federal actions that may have adverse effects on the human environment, future compliance with CEQA and/or NEPA, respectively, would be required.

2.2.3 Environmental Commitments

The RUWAP EIR includes mitigation measures to reduce identified significant impacts of the RUWAP Plan. Addendum No. 1 to the RUWAP EIR, adopted on October 25, 2006 by the MCWD Board modified the mitigation measures to address changes to the RUWAP reflected in the RWP. On February 14, 2007, the MCWD adopted the Mitigation Monitoring and Reporting Program (MMRP) for the RWP, which must be implemented for those components within their service area. As part of the Proposed Action, MCWD, the lead agency under CEQA, is committed to implementing those mitigation measures from the EIR. These measures would be included on plans for the Proposed Action and within specifications, as appropriate, to ensure implementation during final design, construction, and operation.

Section 5 of this EA lists the MMRP environmental commitments adopted by MCWD as required implementation measures during previous CEQA reviews of the Proposed Action. The topical sections correspond to the EIR and Addenda topics and the numbering retains the CEQA

numbering scheme for consistency. These environmental commitments are considered part of the Proposed Action for the purposes of this EA.

2.2.4 Construction Activities

Construction activities for the installation of recycled water distribution pipelines would include removal of existing roadway surface, trenching, installing the pipe, backfilling the trench, compacting the fill material, and re-paving and striping the surface where pavement has been disturbed. If it is determined to be economical, certain portions of the pipeline may be installed under major intersections or highly developed areas using trenchless methods (directional drilling, jacking and borings, or micro-tunneling).

Type of Construction/Equipment

Standard construction equipment is anticipated to be used to install the pipeline, pump stations, recycled water tank, and storage pond. Typically, the following equipment is used for a project of this size and scope: backhoes, cranes, water tankers, graders, generators, flat-bed trucks, excavators, dozers, off highway trucks, compactors, double transfer trucks for soil hauling, concrete trucks, front end loaders, and paving equipment.

Area of Disturbance/Area of Potential Effect

The Area of Disturbance/Area of Potential Effect (APE) for the purpose of the EA analysis assumes that the pipelines would be within the limits of public ROW, within roadways on non-public streets, or for those areas within overland (non-roadway) areas, within an approximately 30-50 foot wide easement (i.e., maximum of 50 feet wide) along the alignment as marked. The APE for those areas along existing roadways assumes that potential effects to vegetated areas may occur within 20 feet from the edge of pavement.

The APE for 5th Avenue pump station would be within the District's parcel site adjacent to the City of Marina's corporation yard. The APE for the WAPP would be within the Pollution Control Agency facility as shown on Figure 3. Overall, in addition to the area encompassed by the pumping plant, about 600 feet of pipeline would also be constructed from the service pump station to the Pollution Control Agency boundary southwest of the plant. Most of the area that would be disturbed is unpaved. At the Blackhorse Reservoir site, the APE corresponds to the MCWD's existing easement limits.

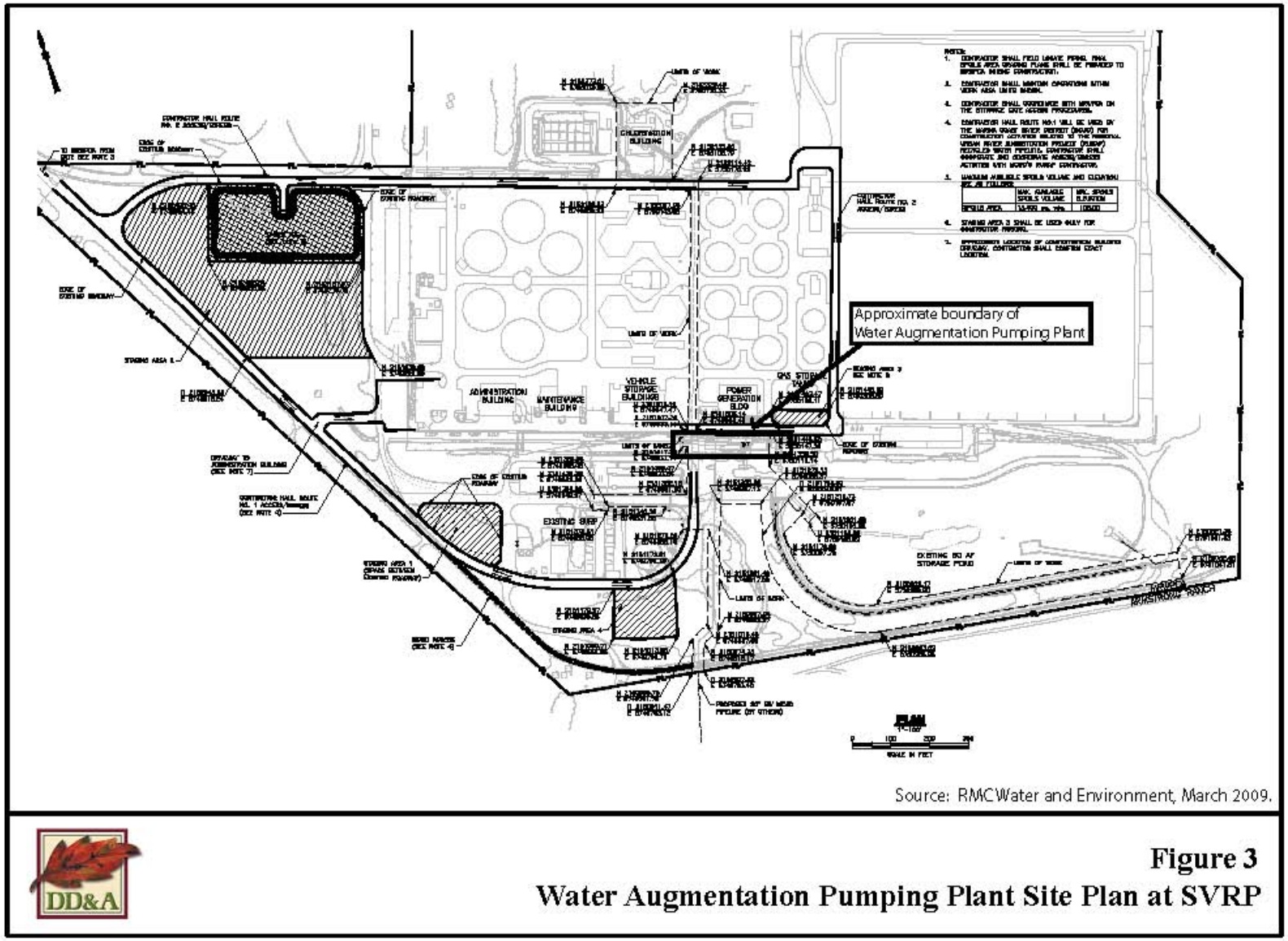

Figure 3
Water Augmentation Pumping Plant Site Plan at SVRP

Staging areas for stockpiling soil and/or storing materials and equipment temporarily during construction would be within the APE described above or other areas, such as adjacent roadways or abandoned parking lots adjacent to the construction sites. There would not be major excavation at the staging sites off of the APE, only minimal grading and construction vehicle parking/equipment storage.

Schedule/Phasing

Project construction of components, for which the MCWD is responsible, is anticipated to commence in winter of 2009. The first portions of the project to be constructed include:

- the main trunk pipeline from the Reclamation Plant at the northern end to the intersection of General Jim Moore and Normandy Road (which is anticipated to take 18 months and be constructed in segments of a minimum of 100 feet per day),
- the 3rd Street/5th Avenue Pump Station (that would require one year to construct coincident with the trunk pipeline),
- the WAPP (that would require one year to construct coincident with the trunk pipeline), and
- the Blackhorse Reservoir (that would require one year to construct coincident with the trunk pipeline).

Construction would be sequenced based upon various constraints imposed by: 1) existing Pollution Control Agency facilities operations, which require some construction of the WAPP to occur during the winter season, and 2) the mitigation described in Section 6, Environmental Commitments, of this EA. Future portions of the project for which timeframes for construction are unknown, include:

- laterals shown as dashed lines in Figure 2, and
- the trunk pipeline and laterals from General Jim Moore at Kimball Avenue in Seaside south into the City of Monterey (including all segments of the pipeline within the City of Monterey).

For the pipeline portions of the project, the construction crew of five to ten workers would stay at the job site during the day. Construction activity would be regulated by each local jurisdiction through their relevant encroachment/easement permit processes. During construction, crews would maintain one lane of traffic in each direction, or one lane for two-way traffic with a flagger where the existing roadway is only two lanes wide. In areas where the existing roadway is four lanes wide, at least two lanes would remain open to traffic.

Section 3 Affected Environment

3.1 Factors Eliminated from Further Analysis

The following resource issues have been eliminated from further consideration because the Proposed Action would not result in impacts to the resources; however, these areas have been analyzed in the RUWAP EIR:

- Aesthetics - Visual resources and character of the open space and urban areas within the project and regional study area would not be diminished by the Proposed Action because all new or expanded facilities would be either: 1) subsurface facilities (i.e., pipelines) that are not visible after construction, or 2) pump stations and other structures proposed in existing public/industrial areas that are already developed with public facilities. The Blackhorse Reservoir proposed near Eucalyptus Road and Parker Flats Cutoff would be low-profile and painted and/or screened to avoid any adverse visual effects.
- Agriculture Resources - The Proposed Action would not convert any agricultural land to urban uses because the trenching and installation of pipeline in these areas would result in only temporary disturbance of the site.
- Biological Resources: Marine – As documented in the CEQA review, the Proposed Action and the No Action Alternative would not adversely affect any marine resources. Other biological issues are evaluated in this EA.
- Public services and utilities (with the exception of water supply and wastewater) – Public services (fire, police, schools, and recreation) would not be adversely affected due to the operation of the Proposed Action. Construction management/traffic control plans would adequately accommodate provision of these services during construction. The Proposed Action may have a beneficial effect on some public services, including fire and recreational services, by providing additional water for fire fighting and irrigation of park lands.
- Traffic - The Proposed Action is a construction and water delivery action and would not directly increase the travel demand on any existing roadways or create the need for new roadways. Accordingly, there would be no effect to transportation or traffic levels within the area except during the construction phase, when construction traffic control plans would be implemented to minimize effects.

3.2 Air Quality

The federal Clean Air Act and the California Clean Air Act mandate the control and reduction of certain air pollutants. Under these Acts, the United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for certain "criteria" pollutants. These pollutants are carbon monoxide (CO), ozone

(O_3), sulfur dioxide (SO_2), nitrogen oxides (NO_x), lead, particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). The ambient air quality standards are designed to protect public health and welfare. The Federal and State Ambient Air Quality Standards are stated below in Table 3-1.

Table 3-1 Federal and State Ambient Air Quality Standards

Federal and State Ambient Air Quality Standards				
Pollutant	**Averaging Time**	**California Standard[a,c]**	**Federal Standard[b]**	
			Primary[c,d]	**Secondary[c,e]**
Ozone (O_3)	1-Hour	0.09 ppm (180 µg/m^3)	- -	- -
	8-Hour	0.07 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	0.075 ppm (147 µg/m^3)
Carbon Monoxide (CO)	1-Hour	20 ppm (23mg/m^3)	35.0 ppm (40mg/m^3)	- -
	8-Hour	9.0 ppm (10mg/m^3)	9.0 ppm (10mg/m^3)	- -
Nitrogen Dioxide (NO_2)	1-Hour	0.18 ppm (339 µg/m^3)	- -	- -
	Annual [f]	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	0.053 ppm (100 µg/m^3)
Sulfur Dioxide (SO_2)	1-Hour	0.25 ppm (655 µg/m^3)	- -	- -
	3-Hour	- -	- -	0.5 ppm (1,300 µg/m^3)
	24-Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	- -
	Annual [f]	- -	0.030 ppm (80 µg/m^3)	- -
PM_{10}	24-Hour	50 µg/m^3	150 µg/m^3	150 µg/m^3
	Annual[f]	20 µg/m^3	- -	- -
$PM_{2.5}$	24-Hour	no separate state standard	35 µg/m^3	35 µg/m^3
	Annual [f]	12 µg/m^3	15 µg/m^3	15 µg/m^3
Lead[f]	Calendar quarter	- -	1.5 µg/m^3	1.5 µg/m^3
	30-day	1.5 µg/m^3	- -	- -
	3-Month[h]	- -	0.15 µg/m^3	0.15 µg/m^3
Sulfate	24-Hour	25 µg/m^3	- -	- -
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	- -	- -
Vinyl Chloride[g]	24-Hour	0.010 ppm (26 µg/m^3)	- -	- -
Visibility Reducing Particles	8-hours (10 am - 6 pm)	In sufficient amounts to reduce prevailing visibility to < 10 miles when relative humidity is < 70% w/ equivalent instrument method	- -	- -

Federal and State Ambient Air Quality Standards				
Pollutant	**Averaging Time**	**California Standard[a,c]**	**Federal Standard[b]**	
			Primary[c,d]	**Secondary[c,e]**

ppm = Parts per Million by volume (or micromoles of pollutant per mole of gas)
$\mu g/m^3$ = Micrograms per Cubic Meter

(a) Standards for ozone, carbon monoxide, sulfur dioxide (1 and 24-hour), nitrogen dioxide, suspended particulate matter – PM_{10} and $PM_{2.5}$, and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

(b) National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. Environmental Protection Agency for further clarification and current federal policies.

(c) Concentrations expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to match reference temperature and pressure.

(d) National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

(e) National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

(f) Annual Arithmetic Mean

(g) The California Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse heal effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

(h) National lead standard, rolling 3-month average: final rule signed October 15, 2008.

Source: California Air Resources Board. 2008. Ambient Air Quality Standards. Nov. 11. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

The Proposed Action is located within the North Central Coast Air Basin (NCCAB) under the jurisdiction of the Monterey Bay Unified Air Pollution Control District (Monterey Air District). The Monterey Air District monitors air quality at ten monitoring stations: Salinas, Hollister, Carmel Valley, Santa Cruz, Monterey, Moss Landing, King City, Scotts Valley, Davenport, and Watsonville. The National Park Service also operates a station at Pinnacles National Monument. The closest monitoring station to the project is the Salinas station (#3), which monitors O_3, PM_{10}, CO, $PM_{2.5}$, and NO_2.

For the past three complete monitoring years (2006, 2007, and 2008), there were no exceedances of a state or National Ambient Air Quality Standards (NAAQS) for CO, $PM_{2.5}$ and NO_2 at the Salinas station. The exceedances of the California PM_{10} standard throughout the NCCAB and at the Salinas monitoring station are shown in Table 3-2. Table 3-3 provides the current attainment status of the NCCAB.

Table 3-2 Exceedances of Ambient Air Quality Standards

EXCEEDANCES OF AMBIENT AIR QUALITY STANDARDS Number of Days (Highest Concentration)		
Year	**North Central Coast Air Basin**	**Salinas Monitoring Station**
State PM_{10} Standard		
2006	3 days (65.0 µg/m^3)	1 day (51.0 µg/m^3)
2007	1 days (51.0 µg/m^3)	0 days (39.0 µg/m^3)
2008	7 days (120.0 µg/m^3)	2 days (52.0 µg/m^3)
State Hourly Ozone Standard		
2006	2 (0.09 ppm)	0 (0.066 ppm)
2007	1 (0.10 ppm)	0 (0.067 ppm)
2008	4 (0.10 ppm)	0 (0.078 ppm)
State/Federal 8-Hour Ozone Standards		
2006	20 (0.085 ppm) / 6 (0.075 ppm)	0 (0.057 ppm) / 0 (0.057 ppm)
2007	17 (0.085 ppm) / 3 (0.074 ppm)	0 (0.059 ppm) / 0 (0.058 ppm)
2008	26 (0.089 ppm) / 12 (0.079 ppm)	0 (0.068 ppm) / 0 (0.067 ppm)
Notes: micrograms per cubic meter (µg/m^3); parts per million (ppm)		

Table 3-3 Current Attainment Status of the North Central Coast Air Basin

CURRENT ATTAINMENT STATUS OF THE NORTH CENTRAL COAST AIR BASIN / MONTEREY COUNTY		
Pollutant	**Federal**	**State**
Ozone (O_3) - 1 hour	Attainment	Nonattainment
Inhalable Particulates (PM_{10})	Attainment	Nonattainment
Fine Particulates ($PM_{2.5}$)	Unclassified/Attainment	Attainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Source: http://www.mbuapcd.org/index.cfm?Doc=386 (January 2009)		

Toxic Air Contaminants (TACs), also referred to as hazardous air pollutants, are generally defined as compounds other than the criteria pollutants known to cause cancer or otherwise harm human health. Exposure to TACs at sufficient concentrations and duration can result in poisoning and rapid onset of sickness, such as nausea or difficulty in breathing. Longer-term effects usually manifest as a form of cancer. Other less measurable effects include immunological, neurological, reproductive, developmental, and respiratory problems. TAC compounds deposited onto soil or into lakes and streams can affect natural systems, and eventually human health, through consumption of contaminated food or changes in ecosystems.

Many industrial processes, such as petroleum refining, electric utility boilers, and chrome plating operations, emit TACs. They are also emitted by local sources, such as diesel generators or pumps, gasoline stations, dry cleaners, and motor vehicle exhaust. TACs include metals, other particles, gases adsorbed onto particles, and certain vapors (e.g., benzene, which is a component

of gasoline). Most industrial processes have undergone significant emission reductions, so focus is now turning to smaller but more numerous sources. In 1998, the California EPA identified the particulate portion of diesel exhaust as a TAC. Diesel particulate is probably the single most significant TAC compound in ambient air within the Monterey Bay Area and NCCAB.

Federal Clean Air Act. The federal Clean Air Act authorized the establishment of the NAAQS and set deadlines for their attainment. EPA is the federal agency charged with administering the federal Clean Air Act and other air quality-related legislation. EPA's principal functions include setting NAAQS, establishing minimum national emission limits for major sources of pollution, and promulgating regulations. The 2007 Plan for maintaining the federal O_3 standard in the NCCAB was adopted by the Monterey Air District Board on March 21, 2007, and by the Association of Monterey Bay Area Governments Board on May 9, 2007.

California Clean Air Act. The California Clean Air Act was signed into law on September 30, 1988, became effective on January 1, 1989, and was amended in 1992. Also known as the "Sher Bill" (Assembly Bill 2595), California Clean Air Act established a mandate to achieve health-based State air quality standards at the earliest practicable date. CARB is the State agency responsible for coordinating both State and Federal air pollution control programs in California. California Clean Air Act specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources. California Clean Air Act also gives districts new authority to regulate indirect sources. CARB approves local air quality management plans that address attainment and maintenance of State Ambient Air Quality Standard as mandated by California Clean Air Act. CARB also coordinates and approves local plans that eventually become part of the State Implementation Plan submittal to the EPA. Monterey Air District prepares a regional Air Quality Management Plan every three years to address attainment and maintenance of the State O_3 Ambient Air Quality Standard in accordance with California Clean Air Act. The most recent Air Quality Management Plan is the 2004 Air Quality Management Plan adopted by the Monterey Air District in October 2004.

Climate Change / Greenhouse Gases

Various gases in the Earth’s atmosphere, classified as atmospheric greenhouse gases, play a critical role in determining the Earth’s surface temperature. Solar radiation enters Earth’s atmosphere from space and a portion of the radiation is absorbed by the Earth’s surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, the radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect.

Among the prominent greenhouse gases contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), O_3, water vapor, nitrous oxide (N_2O), sulfur hexafluoride (SF_6), and chlorofluorocarbons (CFCs). Human-caused emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for enhancing the greenhouse effect (Intergovernmental Panel on Climate Change [IPCC], 2008). Emissions of greenhouse gases contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (California Energy Commission 2006). In California, the transportation sector is the largest emitter of greenhouse gases, followed by electricity generation. A byproduct of fossil fuel combustion is CO_2. CH_4, a highly potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. CO_2 accounts for approximately 85 % of total emissions from human sources, and CH_4 and N_2O account for almost 14%. Processes that absorb and accumulate CO_2, often called CO_2 "sinks," include uptake by vegetation and dissolution into the ocean.

Climate change is a global problem. Greenhouse gases are global pollutants, unlike criteria air pollutants and TACs, which are of regional and local concern, respectively. California is the 12th to 16th largest emitter of CO_2 in the world and produced 492 million gross metric tons of CO_2 equivalents (CO_2e) in 2004 (California Energy Commission 2006). CO_2e are a measurement used to account for various greenhouse gases that have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a greenhouse gas, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. The IPCC determined that CH_4 has a global warming potential of 23 times that of CO_2, and N_2O has a global warming potential of 296 times that of CO_2 (IPCC, 2008).

National Climate Change Regulatory Framework

The Council on Environmental Quality has not provided guidance on addressing climate change in NEPA documents. The U.S. EPA has been commenting on climate change analyses in some Environmental Impact Statements (EIS). The following two relevant court cases have addressed climate change analyses in NEPA documents:

Center for Biological Diversity, et al. v. National Highway Traffic Safety Administration (508 F3d 508 (9th Cir. 2007) November 15, 2007 and 538 F 3d 1172 (9th Cir. 2008 (Opinion withdrawn and modified)). In this case, National Highway Traffic Safety Administration prepared an EA/Finding of No Significant Impact (FONSI) on the adoption of final regulations setting average fuel economy standards for light trucks (including minivans and sport utility vehicles). Center for Biological Diversity, et al. challenged the substantive rules as violating the Energy Policy and Conservation Act of 1975 and failing to prepare an EIS to comply with

NEPA. The 9th circuit held in favor of the Center for Biological Diversity on all NEPA issues, including the following:

- National Highway Traffic Safety Administration has authority to establish fuel standards, which would affect level of greenhouse gas emissions and impact global warming;
- The project's EA failed to evaluate greenhouse gas/Climate change impacts;
- The project's EIS must describe project's incremental contribution to greenhouse gas;
- The project's EIS must provide the necessary contextual information and the cumulative effects on climate change; and
- The project's EIS must describe the nature of climate change impacts to which the project's impacts would contribute.

In Massachusetts, et al. v. EPA (U.S. Supreme Court, 549 U.S. 497 (2007)). In this case, states and environmental organizations petitioned EPA to regulate greenhouse gas emissions. The EPA, citing study by the National Research Council that concluded that "a causal linkage" between greenhouse gases emissions and global warming "cannot be unequivocally established," determined that it was inappropriate for the agency to regulate greenhouse gas emissions without more understanding about the causes of global warming. The court found that the state has standing to bring legal challenge against EPA, because:

- Greenhouse gas emissions present a risk of harm to the state that is both "actual" and "imminent," including sea level rise that may result in loss or inundation of state-owned coastal property (e.g., parks, beaches, reservation, wildlife sanctuaries, and supporting facilities and infrastructure), and
- There is a causal link between emissions of man-made greenhouse gases and global warming/climate change that is well-established.

<u>State of California Climate Change Regulatory Framework</u>

This section describes recent state regulations that specifically address greenhouse gas emissions and global climate change. At the time of writing, there are no regulations setting ambient air quality standards or emission limits for greenhouse gases, except overall California emission limits set by Assembly Bill 32 as described below, and there are no adopted thresholds of significance for greenhouse gas emissions.

Assembly Bill 1493. In 2002, Assembly Bill 1493 was passed requiring that the CARB develop and adopt regulations by January 1, 2005, that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the state."

Executive Order S-3-05. Executive Order S-3-05, signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that

increased temperatures could reduce the Sierra Nevada's snow pack, further exacerbate California's air quality problems and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80% below the 1990 level by 2050. The Executive Order directed the Secretary of the California EPA to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary must also submit biannual reports to the governor and state legislature describing: 1) progress made toward reaching the emission targets; 2) impacts of global warming on California's resources; and 3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the California EPA created a Climate Act Team made up of members from various state agencies and commission. The Climate Act Team released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government, and community actions, as well as through state incentive and regulatory programs.

Assembly Bill 32, the California Climate Solutions Act of 2006. In September 2006, Governor Schwarzenegger signed Assembly Bill 32, the California Climate Solutions Act of 2006. Assembly Bill 32 requires that statewide greenhouse gas emissions be reduced to 1990 levels by the year 2020. This reduction would be accomplished through an enforceable statewide cap on greenhouse gas emissions that will be phased in starting 2012. To effectively implement the cap, Assembly Bill 32 directs CARB to develop and implement regulations to reduce statewide greenhouse gas emissions from stationary sources. Assembly Bill 32 specifies that regulations adopted in response to Assembly Bill 1493 should be used to address greenhouse gas emissions from vehicles. However, Assembly Bill 32 also includes language stating that if the Assembly Bill 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle greenhouse gas emissions under the authorization of Assembly Bill 32. Assembly Bill 32 requires that CARB adopt a quantified cap on greenhouse gas emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in greenhouse gas emissions necessary to meet the cap. Assembly Bill 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions. CARB, with input from the Climate Action Team, approved a Climate Change Scoping Plan in December 2008. The Scoping Plan proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, and enhance public health while creating new jobs and enhancing the growth in California's economy.

Senate Bill 1368. Senate Bill 1368 is the companion bill of Assembly Bill 32 and was signed by Governor Schwarzenegger in September 2006. Senate Bill 1368 required the California Public

Utilities Commission to establish a greenhouse gas emission performance standard. Therefore, on January 25, 2007, the California Public Utilities Commission adopted an interim greenhouse gas Emissions Performance Standard in an effort to help mitigate climate change. The Emissions Performance Standard is a facility-based emissions standard requiring that all new long-term commitments for base load generation to serve California consumers be with power plants that have emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour. "New long-term commitment" refers to new plant investments (new construction), new or renewal contracts with a term of five years or more, or major investments by the utility in its existing base load power plants. In addition, the California Energy Commission established a similar standard for local publicly owned utilities that cannot exceed the greenhouse gas emission rate from a base load combined-cycle natural gas fired plant. On July 29, 2007, the Office of Administrative Law disapproved the Energy Commission's proposed Greenhouse Gases Emission Performance Standard rulemaking action and subsequently, the California Energy Commission revised the proposed regulations. Those regulations can be found at http://www.energy.ca.gov/ghgstandards/documents/index.html. Senate Bill 1368 further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the California Public Utilities Commission and California Energy Commission.

Senate Bill 97. On August 24, 2007, the governor signed this bill which advances a coordinated policy for reducing greenhouse gas emissions by directing the California Office of Planning and Research and the California Resources Agency to develop CEQA guidelines on how state and local agencies should analyze, and when necessary, mitigate greenhouse gas emissions. Subsequently, on June 19, 2008, California Office of Planning and Research published "CEQA & Climate Change Technical Advisory." California Office of Planning and Research, in collaboration with the California Resources Agency, the California EPA, and CARB prepared this technical advisory to provide informal guidance for public agencies as they address the issue of climate change in their CEQA documents. This technical advisory provides California Office of Planning and Research's perspective on the issue and precedes the development of draft implementing regulations for CEQA, in accordance with Senate Bill 97 (Chapter 185, Statutes of 2007).

Senate Bill 375. On September 30, 2008, Governor Schwarzenegger signed Senate Bill 375 (Steinberg; Chapter 728, Statutes of 2008), which combines regional transportation planning with sustainability strategies in order to reduce greenhouse gas emissions in California's urbanized areas. It also establishes new streamlining opportunities for infill and compatible projects under CEQA.

Executive Order S-13-08. On November 14, 2008, Governor Schwarzenegger issued executive order S-13-08 to enhance the state's management of climate impacts from sea level rise,

increased temperatures, shifting precipitation, and extreme weather events. Key actions in the order include: 1) initiate California's first statewide climate change adaptation strategy; 2) ask the National Academy of Science for an expert panel to report on sea level rise impacts in California; 3) issue guidance to state agencies to plan for sea level rise in designated coastal and floodplain areas for new projects; and 4) initiate a report on critical existing and planned infrastructure projects vulnerable to sea level rise.

3.3 Biological Resources

3.3.1 Introduction

This section provides the results of the biological analysis conducted by Denise Duffy and Associates (DD&A) for the Proposed Action. The analysis includes a description of the existing biotic resources, identification of the special-status plant and wildlife species and sensitive habitats that occur or may occur, and description of the regulations and agency permits that may be required. The analysis is based upon the biological evaluation conducted for the RUWAP EIR (2004) as modified by the Addendum No. 1 and No. 2 and the results of recent botanical and wildlife surveys.

3.3.2 Survey Methodology

Area of Potential Effect

For the purposes of this analysis, the APE assumes that the pipelines would be within the limits of public ROW, within roadways on non-public streets, or for those areas within overland (non-roadway) areas, it would be within an approximate 30-50 foot wide easement (i.e., maximum of 50 feet wide) along the alignment as marked. The APE for those areas along existing roadways assumes that potential effects to vegetated areas may occur within 20 feet from the edge of pavement.

The APE for the booster pump station at 3rd Street and 5th Avenue would be within MCWD's parcel site adjacent to the City of Marina's Corporation Yard, which is largely paved. The APE for the WAPP and associated pipeline would be within the Pollution Control Agency facility site. In addition to the area encompassed by the WAPP, about 600 feet of pipeline would also be constructed from the service pump station to the Pollution Control Agency boundary southwest of the plant. Most of the area required for the construction of the WAPP and associated pipeline is currently unpaved.

At the Blackhorse Reservoir site, the APE corresponds to the MCWD's existing easement limits.

Staging areas for temporary stockpiling soil and/or storing materials and equipment during construction for all project components would be within the APEs described above. No major

excavation at the staging sites is proposed, and only minimal grading and construction for vehicle parking/equipment storage would occur within the established APEs.

Surveys Conducted

The Proposed Action would occur mainly along major roadways and through some major intersections within roadway ROWs in residential and commercial areas with the exception of four pipeline alignment portions: 1) the alignment from the proposed WAPP to the Plant's property boundary; 2) the alignment from the proposed Reclamation Plant to Crescent Avenue within Armstrong Ranch; 3) the portion that falls within the boundaries of CSUMB (from 3rd Street to General Jim Moore Boulevard); and 4) the alignments near Blackhorse Reservoir site (beginning south of Marshall School on Normandy Road to Ardennes Circle ROW, and from there to the intersection of Parker Flats Cutoff and Eucalyptus Road). Focused botanical surveys were conducted by DD&A along these alignments on March 31, April 1, and June 19-20, 2005, May 18 and September 27, 2006, April 12 - 13, 2007, and April 15, 2009.

In addition to the surveys conducted within the off-roadway pipeline alignment segments, DD&A conducted focused botanical surveys between April 16 and April 24, 2007, in the vegetated areas adjacent to the roadways (within 20 feet from edge of pavement) that may be affected during construction, with the exception of the following segments:

- *Main trunk pipeline from approximately Ardennes Circle south to the intersection of General Jim Moore Boulevard at Eucalyptus Road and Coe Avenue.* This portion of pipeline has been installed by the Reuse Authority and MCWD as part of the General Jim Moore Boulevard and Eucalyptus Road Improvement Project. Therefore, no surveys were conducted along this portion of the alignment because construction is currently being completed.

- *Main trunk pipeline from approximately the intersection of General Jim Moore Boulevard at Eucalyptus Road and Coe Avenue to South Boundary Road.* This portion of pipeline would be installed concurrently with construction planned for General Jim Moore Boulevard and Eucalyptus Road by the Reuse Authority. The EA/IS and FONSI/Mitigated Negative Declaration (MND) (March 2005), adopted by Reuse Authority on September 9, 2005, identified the potential impacts to special-status plants and wildlife and provided mitigation to reduce impacts to a less-than-significant level. Because the Proposed Action would not result in additional impacts to the species identified along this portion of the alignment, there would be no need for any additional surveys or mitigation for this portion of the alignment.

- *Main truck pipeline and laterals starting at General Jim Moore Boulevard intersection with Kimball Avenue and to the west and south through Seaside and Monterey.* No

focused or protocol-level surveys were conducted since this portion of pipeline has not been designed to the project-level. For the purpose of this analysis, it is assumed the pipelines would be constructed within roadways or landscaped areas not supporting any special-status species or habitat.

Surveys for the California tiger salamander (CTS) within the former Fort Ord have been on-going for a number of years. The U.S. Army (Army) prepared the *Biological Evaluation of Army Actions that May Affect California Tiger Salamander and Contra Costa Goldfields Critical Habitat Former Fort Ord, Monterey County, California* (December 2004), which describes the history and results of surveys conducted on the former Fort Ord. This evaluation was the basis of the Army's re-initiation of Section 7 consultation with the USFWS to address the recent listing of CTS and designation of critical habitat for the Contra Costa goldfields. The survey results described in the Army's evaluation and the resulting Biological Opinion (BO) (issued March 2005) were used in this analysis to determine CTS presence within the pipeline alignment on the former Fort Ord. For the portion of the Proposed Action that contains suitable upland habitat for CTS and falls outside of the former Fort Ord (i.e., the Reclamation Plant and Armstrong Ranch), protocol-level surveys were conducted within an agricultural water storage basin located adjacent to the APE on the eastern side of Armstrong Ranch to determine presence of CTS, per the recommendations of the USFWS.

The RWP sites were surveyed for sensitive habitats. Sensitive habitats include riparian corridors, wetlands, habitats for legally protected species, areas of high biological diversity, areas supporting rare or special-status wildlife habitat, and unusual or regionally restricted habitat types. Habitat types considered sensitive include those listed on the California Natural Diversity Database's (CNDDB) working list of high priority and rare natural communities habitats (i.e., those habitats that are Rare or Endangered within the borders of California) (California Department of Fish & Game [CDFG] 2003), and those that are designated as Critical Habitat in accordance with the federal ESA.

3.3.3 Regulatory Setting

Federal Regulations

National Environmental Policy Act. NEPA, signed into law in 1970, established an environmental review process that applies to federal agencies. Under NEPA, federal agencies are authorized and directed, to the fullest extent possible, to carry out their regulations, policies, and programs in accordance with NEPA's policies of environmental protection. NEPA applies to all federal agencies and to most of the activities they manage, regulate, or fund that affect the environment.

Federal Endangered Species Act. Provisions of the federal ESA of 1973 (16 USC 1532 et seq., as amended) protect federally listed Threatened or Endangered species and their habitats from unlawful take. Listed species include those for which proposed and final rules have been published in the Federal Register USFWS or National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS). The federal ESA is administered by the USFWS and NMFS. In general, NMFS is responsible for the protection of federal ESA-listed marine species and anadromous fish, whereas other listed species are under USFWS jurisdiction.

Section 9 of federal ESA prohibits the take of any fish or wildlife species that are federally listed as endangered. Take, as defined by federal ESA, is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Harm is defined as "any act that kills or injures the species, including significant habitat modification." In addition, Section 9 prohibits removing, digging up, and maliciously damaging or destroying federally listed plants on sites under federal jurisdiction. Section 9 does not prohibit take of federally listed plants on sites not under federal jurisdiction. If there is the potential for take of a federally listed species, consultation through Section 7 (if there is a federal nexus) or obtaining a Section 10(a)(1)(B) Incidental Take Permit (if there is no federal nexus) would be needed to authorize the "incidental take" of that species. Federal agency actions include activities that are on federal land, conducted by a federal agency, funded by a federal agency, or authorized by a federal agency (including issuance of federal permits). Due to the presence of Monterey spineflower within the RWP site, Reclamation has initiated formal Section 7 consultation with the USFWS.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) of 1918 prohibits killing, possessing, or trading migratory birds except in accordance with regulation prescribed by the Secretary of the Interior. Most actions that result in taking or in permanent or temporary possession of a protected species constitute violations of the MBTA. The USFWS is responsible for overseeing compliance with the MBTA.

State Regulations

California Environmental Quality Act. The CEQA, enacted in 1970, was modeled after NEPA. CEQA encourages the protection of all aspects of the environment, requiring state and local agencies to prepare multi-disciplinary environmental impacts analyses and make decisions based on those studies' findings regarding the environmental effects of the Proposed Action. CEQA applies to all discretionary activities proposed to be carried out or approved by California public agencies, including state, regional, county, and local agencies, unless an exemption applies. CEQA applies to private activities that require discretionary government approvals. As previously stated, an EIR and Addendums have been prepared for this project in accordance with CEQA.

California Endangered Species Act. The California ESA was enacted in 1984. The California Code of Regulations (Title 14, Section 670.5) lists animal species considered Endangered or Threatened by the state. Section 2090 of the California ESA requires state agencies to comply with endangered species protection and recovery, as well as to promote conservation of these species. Section 2080 of the Fish and Game Code prohibits "take" of any species that the commission determines to be an Endangered species or a Threatened species. "Take" is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." It does not include habitat destruction in the definition of take. A Section 2081 Incidental Take Permit from the CDFG is required to "take" any state listed species.

California Fish and Game Code. Raptors (e.g., eagles, hawks, and owls) and their nests are protected under both federal and state laws and regulations. Section 3503 of the CDFG Code prohibits the killing, possession, or destruction of bird eggs or bird nests. Section 3503.5 and 3513 prohibit the killing, possession, or destruction of all nesting birds (including raptors and passerines). Section 3503.5 states that it is "unlawful to take, possess, or destroy the nest or eggs of any such bird except otherwise provided by this code or any regulation adopted pursuant thereto." Section 3513 prohibits the take or possession of any migratory nongame birds designated under the federal Migratory Bird Treaty Act. Section 3800 prohibits take of nongame birds.

The classification of Fully Protected was the state's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish (Section 5515), mammals (Section 4700), amphibians and reptiles (Section 5050), and birds (Section 3511). Most Fully Protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations. Fully Protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

The CDFG also maintains a list of animal "species of special concern," most of which are species whose breeding populations in California may face extirpation if current population trends continue. Although these species have no legal status, the CDFG recommends considering these species during analysis of proposed project impacts to protect declining populations and avoid the need to list them as endangered in the future.

Other State Conservation Programs. The Natural Heritage Division of the CDFG administers the state Rare Species Program. The CDFG maintains lists of designated endangered, threatened, and rare plant and animal species. Listed species either were designated under the California Native Plant Protection Act or designated by the Fish and Game Commission. In addition to recognizing three levels of endangerment, the CDFG can afford interim protection to Candidate species while they are being reviewed by the CDFG Commission.

Under provisions of Section 15380(d) of CEQA, the project lead agency and CDFG, in making a determination of significance, must treat non-listed plant and animal species as equivalent to listed species if such species satisfy the minimum biological criteria for listing. In general, the CDFG considers plant species on List 1 or 2 of the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California (Tibor, 2001) as qualifying for legal protection under this CEQA provision. Species on CNPS List 3 or 4 may, but generally do not, qualify for protection under this provision.

Local Regulations

The Proposed Action would be required to comply with policies of the General Plans for the following jurisdictions as well as other applicable codes or ordinances (i.e., tree ordinances): City of Marina, City of Seaside, Sand City, City of Del Rey Oaks, City of Monterey, Monterey County, Fort Ord Reuse Plan, and the Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord (hereafter, "Habitat Management Plan" [U.S. Army Corps of Engineers, 1997]).

The Fort Ord Habitat Management Plan. The Army's decision to close and dispose of the Fort Ord military base is considered a major federal action that could affect listed species under the federal ESA. The USFWS issued a Final BO on the disposal and reuse of former Fort Ord requiring that a Habitat Management Plan be developed and implemented to reduce the incidental take of listed species and loss of habitat that supports these species (October 19, 1993).

Therefore, the Habitat Management Plan was prepared to assess impacts on vegetation and wildlife resources and provide mitigation for their loss associated with the disposal and reuse of former Fort Ord. The Habitat Management Plan establishes guidelines for the conservation and management of species and habitats on former Fort Ord lands by identifying lands that are available for development, lands that have some restrictions with development, and habitat reserve areas. The intent of the plan is to establish large, contiguous habitat conservation areas and corridors to compensate for future development in other areas of the former base. The Habitat Management Plan identifies what type of activities can occur on each parcel at former Fort Ord and parcels are designated as "development with no restrictions," "habitat reserves with management guidelines," or "habitat reserves with some development allowed." The Habitat

Management Plan sets the standards to assure the long-term viability of former Fort Ord's biological resources in the context of base reuse so that no further mitigation should be necessary for impacts to species and habitats considered in the Habitat Management Plan. This plan has been approved by the USFWS; the Habitat Management Plan, deed restrictions, and Memoranda of Agreement between the Army and various land recipients provide the legal mechanism to assure Habitat Management Plan implementation. It is a legally binding document, and all recipients of former Fort Ord lands are required to abide by its management requirements and procedures.

The Habitat Management Plan anticipates some losses of special-status species and sensitive habitats as a result of redevelopment of the former Fort Ord. With the designated reserves and corridors and habitat management requirements in place, the losses of individuals of species and sensitive habitats considered in the Habitat Management Plan are not expected to jeopardize the long-term viability of those species, their populations, or sensitive habitats on former Fort Ord. Recipients of disposed land with restrictions or management guidelines designated by the Habitat Management Plan would be obligated to implement those specific measures through the Habitat Management Plan and through deed covenants.

However, the Habitat Management Plan does not provide specific authorization for incidental take of federal or state listed species to future land recipients under the federal ESA or California ESA. In compliance with the federal ESA and California ESA, the Reuse Authority is currently in the process of obtaining a Section 10 Incidental Take Permit from the USFWS and Section 2081 Incidental Take Permit from CDFG, which would provide base-wide coverage for take of federal and state listed wildlife and plant species to all non-federal entities receiving land on the former Fort Ord. This process involves the preparation of a Habitat Conservation Plan and Implementing Agreement. The Habitat Conservation Plan is currently in draft form and being reviewed by the resource agencies.

A large portion of the Proposed Action is located within the former Fort Ord and those portions are primarily within existing roadways or shoulders, with the exception of the components near the Blackhorse Reservoir and a short segment of trunk pipeline within the CSUMB campus. These areas are designated as development parcels in the Habitat Management Plan. Therefore, impacts to Habitat Management Plan species and Habitat Management Plan habitats occurring within these areas have been anticipated and mitigated through establishment of habitat reserves and corridors and assignment of management requirements for other parcels on former Fort Ord. Because the Proposed Action would not result in additional effects to Habitat Management Plan species and habitats beyond those anticipated in the Habitat Management Plan, no additional mitigation would be required for effects on these species with the former Fort Ord.

3.3.4 Special-Status Species and Sensitive Habitats

Special-status species include those plants and animals that have been formally listed or proposed for listing as Endangered or Threatened, or are Candidates for such listing under the federal ESA or the California ESA. Listed species are afforded protection under the federal ESA and California ESA. Plants listed as rare under the California Native Plant Protection Act or on the CNPS lists are also treated as special-status species, as well as CDFG state species of special concern and fully protected animals. Although they have no special legal status, these species are given management consideration whenever possible.

Current agency status information was obtained from the USFWS and CDFG (2003 - 2009) for species that are listed, proposed for listing, or candidates for listing as Threatened or Endangered under the federal ESA or California ESA, as well as those considered CDFG species of special concern. The project falls primarily within the Marina 7.5 degree quadrangle. Reports from the CDFG CNDDB for the Marina quadrangle and all contiguous quadrangles were reviewed for special-status species occurrences prior to conducting the site assessment.

A list of special-status plant and wildlife species known or that have the potential to occur within the APE, along with their legal status, habitat requirements, and brief statement of the likelihood to occur was compiled for the RUWAP EIR. The list was determined by evaluating the geographic ranges and habitat requirements of species and existing habitat conditions, as well as maps documenting the occurrences and distribution of special-status species. The list has been updated for this EA to reflect changes in legal status and the likelihood to occur based on species occurrence information, revisions to the locations of the alignment, and the results of focused botanical surveys conducted since the publication of the RUWAP EIR in 2004. Please refer to Table 1 in Appendix A for the updated table.

Special-Status Plants

Based on the literature research, site visits, focused botanical surveys, and the CNDDB occurrence reports, six special-status plant species are known or have the potential to occur within the undeveloped portions of the Proposed Action site (see Table 1 of Appendix A). Of these species, three special-status plant species were observed during focused botanical surveys conducted in 2005, 2006, and 2007 within the CSUMB and Blackhorse Reservoir portions of the RWP site: Monterey spineflower (*Chorizanthe pungens* var. *pungens*), a federally threatened and CNPS List 1B species; sandmat manzanita (*Arctostaphylos pumila*), a CNPS List 1B species; and Monterey ceanothus (*Ceanothus cuneatus* var. *rigidus*), a CNPS List 4. Only Monterey spineflower is protected under the federal ESA; therefore further analysis will only be done on this species.

Monterey spineflower was identified within the Armstrong Ranch portion of the RWP site during botanical surveys conducted in 2007. A focused botanical survey was conducted on April

12 and 13, 2007, along the portion of the alignment from the Pollution Control Agencies to Crescent Avenue within Armstrong Ranch. Approximately 0.22 acre of low to medium density populations of Monterey spineflower were identified within this portion of the alignment. This portion of the alignment is not covered under the USFWS's existing BOs with the Army (as discussed below); therefore, Reclamation has included the potential effects to Monterey spineflower in their consultation process.

Sand gilia (*Gilia tenuiflora* ssp. *arenaria*), a federally listed endangered, state listed threatened, and CNPS List 1B species has the potential to occur within the WAPP site. However, rare plant surveys were conducted for the WAPP site at the Reclamation Plant by DD&A on April 15, 2009, and these surveys did not find any rare plants in this area.

For the portion of the Proposed Action within the former Fort Ord, the RWP components lie within "development" parcels designated by the Habitat Management Plan, since the Army has already consulted with the USFWS on the biological effects associated with the closure and reuse of the former Fort Ord. The USFWS issued two BOs on the Army's actions relative to Monterey spineflower and critical habitat,[3] specifically:

- *Monterey Spineflower Critical Habitat:* BO dated October 22, 2002, in a letter from USFWS to the Army, Subject: BO on the Closure and Reuse of Fort Ord, Monterey County, California, as it affects Monterey Spineflower Critical Habitat (1-8-01-F-70R).

- *Monterey Spineflower*: Biological and Conference Opinion dated March 30, 1999, in a letter from USFWS to Army, Subject: Biological and Conference Opinion on the Closure and Reuse of Fort Ord, Monterey County, California (1-8-99-F/C-39R).

Special-Status Wildlife

Based on literature research, site visits, and the CNDDB occurrence reports, special-status wildlife species are known or have the potential to occur within the area of the Proposed Action. These include black legless lizard (*Anniella pulchra nigra*), coast horned lizard (*Phrynosoma coronatum frontale*), CTS, burrowing owl (*Athene cunicularia*), and nesting raptors. However, only CTS, protected under the federal ESA, and migratory birds, protected under the MBTA, are analyzed within this EA. A description of the habitat requirements and brief life history narrative for each of these species is included in Table 1 of Appendix A. Other species are considered unlikely to occur within or adjacent to the site due to the lack of appropriate habitat.

The USFWS recommended that protocol-level surveys for CTS be conducted within an agricultural water storage basin located on the eastern side of Armstrong Ranch (outside of the

[3] No critical habitat for Monterey spineflower occurs within the Proposed Action area.

APE) to determine the presence of CTS within the APE. On March 28, 2007, DD&A conducted protocol-level aquatic sampling at the basin and identified 13 larvae and five eggs, which were preliminarily identified as potentially CTS. With permission from the USFWS, DD&A collected genetic material (i.e., tail tips) from 27 salamander larvae on May 23, 2007. The genetic material was preserved and transported to the University of California, Davis laboratory of Dr. H. Brad Shaffer.

Dr. Shaffer concluded that the genotypes of salamanders present within the agricultural basin are comprised primarily of introduced alleles[4]. The data suggests that the site has been subjected to invasion by introduced non-native tiger salamanders. Given that the agricultural basin is relatively young (approximately 10 years old) and that there are extremely low levels of native CTS alleles present, native CTS individuals are unlikely to be encountered in this population. As a result, through Section 7 consultation, Reclamation is requesting concurrence from the USFWS that the tiger salamander population at the agricultural basin is not protected under the federal ESA, and the RWP is not expected to adversely affect CTS.

Based on the Army's evaluation and the USFWS's BO, a portion of the proposed alignment along General Jim Moore Boulevard from approximately Broadway Road to South Boundary Road lies within two kilometers of three potential CTS breeding sites. This EA assumes that all construction activities would occur outside of vegetated areas, which would include any suitable upland habitat for CTS, and that the construction of this portion of the alignment would occur concurrently with the construction of Reuse Authority's General Jim Moore Boulevard and Eucalyptus Road Improvement Project. Further, the USFWS issued a BO on the Army's actions relative to CTS (1-8-04-F-25R). Therefore, the effects to CTS associated with the construction activities of the Proposed Action have been previously identified and mitigated in the EA/IS and FONSI/MND. As documented in the EA/IS, Reuse Authority is required to comply with the terms and conditions of the BO referenced above. No additional effects to CTS would occur as a result of the Proposed Action along this portion of the alignment. Therefore, the effects to CTS associated with the construction and maintenance activities have been previously addressed in the existing BO, and no additional mitigation or consultation is required.

Sensitive Habitats

The CSUMB and Blackhorse Reservoir portions of the Proposed Action site on the former Fort Ord contain maritime chaparral, a habitat that is considered sensitive by the CDFG but is not protected under the federal ESA.

[4] An allele is one member of a pair or series of genes that occupy a specific position on a specific chromosome.

3.3.5 Biological Communities

The biological communities within the undeveloped portions of the RWP site include annual grassland, coastal scrub, ruderal/disturbed, developed, and maritime chaparral. These communities were described in the RUWAP EIR and are incorporated by reference.

3.4 Cultural Resources

3.4.1 Introduction

This section is based upon the *Phase 1 Archaeological Reconnaissance For The Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, Marina, Ord Community, Seaside And Monterey, Monterey County, California* by Archaeological Consulting, revision dated May 22, 2007, and the *Phase 1 Archaeological Reconnaissance for Two Additional Alignments* dated September 4, 2007. The information in these documents is considered confidential and is available on an as-needed basis to qualified individuals.

3.4.2 Environmental Setting

The project APE is located in rural and urbanized areas of stabilized coastal dunes between the Salinas River and the eastern part of the City of Monterey. The vegetation community in the dunes consists of widely spaced, low growing dune scrub, and grasses. The Monterey Bay area enjoys a mild Mediterranean climate characterized by generally cool summers, moderated by night and morning fog and an afternoon onshore wind, and generally mild winters with intermittent rain and rare frosts. This natural environment, which provided an abundance of terrestrial and marine resources, was occupied by native populations for millennia before the advent of European explorers and missionaries in the 1700's (Archaeological Consulting 2007a).

3.4.3 Regional Cultural Setting/Ethnography

The project area lies within the currently recognized ethnographic territory of the Costanoan (often called Ohlone) linguistic group. Discussions of this group and their territorial boundaries can be found in Breschini, Haversat, and Hampson (1983), Kroeber (1925), Levy (1978), Margolin (1978), and other sources. In brief, the group followed a general hunting and gathering subsistence pattern with partial dependence on the natural acorn crop. Habitation is considered to have been semi-sedentary, and occupation sites can be expected most often at the confluence of streams, other areas of similar topography along streams, or in the vicinity of springs, although the original sources of water may no longer be present or adequate. Also, resource gathering and processing areas and associated temporary campsites are frequently found on the coast and in other locations containing resources utilized by the group. Factors that influence the location of these sites include the presence of suitable exposures of rock for bedrock mortars or other milling activities, the presence of specific resources (oak groves, marshes, quarries, game

trails, trade routes, etc.), proximity to water, and the availability of shelter. Temporary camps or other activity areas can also be found along ridges or other travel corridors.

Following the founding of Mission San Carlos Borromeo de Carmelo in 1770 at the Presidio of Monterey and the move to its permanent site on the Carmel River the following year, the native populations went into decline. In 1776, Monterey was named the capital of Alta and Baja California. The European population of Monterey grew slowly and fitfully in its early years, but within a generation, a thriving port city had grown up on the low hills overlooking the bay.

3.4.4 Site Cultural Setting

The record search of the files at the Northwest Regional Information Center found that there are no recorded cultural resources located within the project APE. One National Register of Historic Places (National Register) ineligible historic resource, the Fort Ord Water Tank, is located adjacent to the project APE at the Blackhorse Reservoir. In addition to the National Register, a search of the California Register of Historical Resources, the California Inventory of Historical Resources (March 1976), California Historical Landmarks, and the California Points of Historical Interest was completed to identify any listed cultural resources that may be present in the APE. This search did not identify any listed resources within the current project APE.

Several previous archaeological reconnaissance studies have been conducted in and near portions of the project APE and environs. None of them discovered resources within the current project APE in Marina and Seaside. Twenty-one cultural resources have been recorded within one kilometer of the City of Monterey portion of the APE. Only three of these resources, CA-MNT-372, CA-MNT-373, and CA-MNT-955 are in close proximity to the final project APE.

3.4.5 Regulatory Setting

Because of a federal nexus for this Proposed Action, this undertaking is subject to Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. 470f). Section 106 of the NHPA (1966, amended 2000) requires federal agencies to evaluate the effects of federal undertakings on historic properties and on cultural resources that are included in or eligible for inclusion in the National Register (16 U.S.C. 470f and 36 CFR Part 800). Agencies are required to identify historic properties within a project's APE and evaluate impacts. If the federal project would have an adverse effect on historic properties (36 CFR Part 800), the agency is required to consult with the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation, Indian tribes, and interested parties to develop alternatives or mitigation measures that would allow the project to proceed.

The term "cultural resource" is used to describe archaeological sites that illustrate evidence of past human use of the landscape, the built environment that are represented by structures, such as dams, roadways, and buildings; and traditional resources, including but not limited to structures,

objects, districts, and sites. A cultural resource that is greater than 50 years old qualifies for consideration as an historic property. The criteria used to determine whether a cultural resource is a historic property and, therefore, eligible for inclusion on the National Register are defined in 36 CFR Part 60, revised July 1, 2004. These are as follows:

> Sec. 60.4 Criteria for Evaluation. National Register criteria for evaluation. The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
> (b) that are associated with the lives of persons significant in our past; or
> (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
> (d) that have yielded, or may be likely to yield, information important in prehistory or history.

Based on the background research and the field reconnaissance, the project APE contains no listed or otherwise known cultural resources.

3.5 Environmental Justice

Table 3-4 provides population percentages for the minority and poverty populations of the Cities of Monterey, Marina, Seaside, Del Rey Oaks, and the County of Monterey. As shown in Table 3-4, the County of Monterey has a 44.06 percent minority population and 11.7 percent population living below poverty. Of the cities within the Proposed Action area, two have above 50 percent minority populations, Marina (56.26 percent) and Seaside (50.79 percent). The percentage of population suffering from poverty within these cities, as shown in Table 3-4, is below 13.1%.

Table 3-4 Project Area Minority and Poverty Profile

PROJECT AREA MINORITY AND POVERTY PROFILE					
Place	**Population**	**# of Minority**	**% of Minority**	**# of Poverty**	**% of Poverty**
County of Monterey	401,762	177,080	44.06	31,917	11.7
City of Monterey	29,674	5,689	17.17	2,105	7.8
City of Marina	25,101	14,122	56.26	2,518	13.1
City of Seaside	31,696	16,097	50.79	3,808	12.1
City of Del Rey Oaks	1,650	225	13.63	83	5.0
Source: U.S. Census 2000 Lookup, http:/factfinder.census.gov accessed October 25, 2006					

The unit census tract divides cities up to specific diminutive geographic areas with which to accurately determine the minority and poverty populations. There are 20 specific census tracts traversed by the Proposed Action route. As shown in Table 3-5, of those 20 census tracts, six have over 50 percent minority populations. These six tracts are located in the Cities of Seaside and Marina. As further identified in Table 3-5, no census tracts contain low-income populations in excess of 50 percent.

Table 3-5 U.S. Census Tract Minority and Poverty Population in Project Area

U.S. CENSUS TRACT MINORITY & POVERTY POPULATION IN PROJECT AREA				
Tract Names	**Population**	**Minority #**	**Minority %**	**Poverty %**
119	4548	395	8.69	2.3
125	5315	948	17.84	7.3
126	2510	449	17.89	0.0
127	3538	724	20.46	10.6
128	5502	702	12.76	3.4
130	3469	665	19.17	6.7
131	1796	333	18.54	1.3
133	6019	1747	29.02	15.3
134	1650	225	13.64	5.0
135	5042	2767	54.88	11.1
136	4524	2122	46.91	18.1
137	5331	3329	62.45	14.4
138	5889	4190	71.50	11.7
139	2765	1298	46.94	11.0
140	2556	1211	47.38	19.3
141.01	8322	4977	59.81	26.8
141.02	2054	1339	65.19	35.4
141.03	5890	1269	21.54	4.7
142	9570	5309	55.48	12.7
143.02	4179	1980	47.38	11.5
TOTAL	97273	39524	40.63	11.4
Source: U.S. Census 2000 Lookup, http:/factfinder.census.gov accessed October 25, 2006				

3.6 Geology and Soils

3.6.1 Geology/Soils

The project area is situated within the low-lying coastal foothills adjacent to the northern portion of Salinas River Valley in the Coast Ranges Geomorphic Province of California. In general, the province consists of several separate mountain ranges intersected by major valleys controlled by geologic structure (Bailey 1966). The portion of the province in Monterey County that includes the Proposed Action area consists of uplifted and dissected Tertiary sedimentary rocks overlain by Quaternary deposits.

The proposed pipeline alignment generally would run along existing roadways and MCWD rights-of-way. General areas where the pipeline alignment would be located on undeveloped land are as follows: 1) the alignment from the proposed Reclamation Plant pump station to the Reclamation Plant property boundary; 2) the alignment from the Reclamation Plant boundary to Crescent Avenue within Armstrong Ranch; 3) the portion that falls within the boundaries of CSUMB (from 3rd Street to General Jim Moore Boulevard); and 4) the alignments near Blackhorse Reservoir site (beginning south of Marshall School on Normandy Road to Ardennes Circle ROW and from there to the intersection of Parker Flats Cutoff and Eucalyptus Road).

The topography of the area of the Proposed Action is generally characterized by rolling hills with gradual slopes. The north end of the proposed pipeline alignment near the Reclamation Plant would have ground surface elevations of about 100 feet (mean sea level). As the proposed alignment extends south, surface elevations slope downward to a minimum elevation within the City of Marina of around 20 feet. The elevation increases again as the proposed alignment progresses to the south through former Fort Ord. The highest elevation, about 410 feet, is near the Blackhorse reservoir, located east of the proposed General Jim Moore Boulevard main trunk alignment. The main alignment then descends to about elevation 100 feet at the south end of General Jim Moore Boulevard. Further south and west, the proposed alignment continues to drop to an elevation of approximately 15 feet at Del Monte Avenue in the City of Monterey.

The majority of proposed pipeline alignment would be underlain by Quaternary age stabilized dune deposits. These deposits consist of poorly graded sands to silty sands. The sands vary from loose to dense within the upper 10 feet of the soil profile where the pipeline improvements would be located. Geologic mapping of the area indicates that Tertiary age diatomite and shale bedrock may be encountered at shallow depths at the south end of the project alignment.

Near the north end of the alignment, groundwater has been reported at a depth of about 40 feet below ground surface. Deep monitoring wells installed in the past near General Jim Moore Boulevard on the former Fort Ord encountered groundwater at depths varying from 60 to 180 feet depending on the ground surface elevation.

A site-specific geotechnical report was prepared that addressed the proposed Blackhorse Reservoir and associated facilities (Kleinfelder Inc., 2005). The near surface soils were identified as brown, damp, loose to medium dense, poorly graded sand with silt to silty sand. The sandy soil extended down to 100 feet below ground surface in the deepest boring on the site. Groundwater was not encountered at this location.

3.6.2 Seismicity

The Proposed Action is located within an active seismic area. Most earthquakes in the area are linked to the San Andreas Fault, located approximately 25 miles east, and the Palo Colorado-San Gregorio fault, located about 14 miles southwest of former Fort Ord. The potential of earthquake damage from ground shaking is moderate to high in the project vicinity; liquefaction potential in the area is generally considered low (U.S. Army Corps of Engineers, April 1992).

3.7 Hazards and Hazardous Materials

Fort Ord was listed on the National Priorities List in 1990. The former Fort Ord military base has been surveyed for presence of contaminated soils and groundwater (see Appendix D of the RUWAP EIR). The entire former Fort Ord installation is included on a list of hazardous waste sites compiled pursuant to California Government Code Section 65962.5, although the entire former base is not contaminated.

Fort Ord contains unexploded ordnances and hazardous waste, which may impact the health and safety of users of the area at risk. Appendix D of the RUWAP EIR includes details about the hazardous waste sites and their types throughout Fort Ord specifically. All sites are located within approximately one mile of the Proposed Action (the RWP). Site locations are illustrated in Appendix D of the RUWAP EIR - Hazardous and Toxic Waste Sites (June 1995) the Fort Ord Sites of Concern Map of the Superfund Actions Areas of Concern (for additional information, refer to http://www.fortordcleanup.com/cleanupprgrm/superfund.asp, 2003). Fire hazards exist at the former Fort Ord primarily as wildfire potential in open areas and habitat areas. Emergency response and fire hazards are addressed in the Public Services and Recreation sections of this EA.

3.7.1 City of Marina

According to the City of Marina General Plan EIR, there is no evidence of existing hazards and hazardous waste sites within the City of Marina. Following Fort Ord Military Base closure in 1991, there have been several land transfers to the City of Marina from the former Fort Ord.

Marina Municipal Airport (formerly Fritzsche Army Airfield), located south of the Reclamation Plant site, was transferred to the City of Marina and became available for commercial business in

October 1995. Environmental studies and reports on hazardous substances located or believed to be present within various Fort Ord sites, including the sites to be transferred to the City of Marina can be reviewed online as part of the Army's Base Realignment and Closure Administrative Record. The transfer status of individual parcels is also included in the Administrative Record (www.fortordcleanup.com/adminrec/arsearch.asp).

Reports on Findings of Suitability to Transfer and Findings of Suitability to Early Transfer were completed for a majority of the Fort Ord Sites of Concern (Appendix D of the RUWAP EIR) to allow for transfer to Reuse Authority under an Economic Development Conveyance or Public Benefit Conveyance. These areas are located within a one-mile radius of the proposed recycled water pipeline.

3.7.2 California State University Monterey Bay

CSUMB is located on the Former Fort Ord, south of the City of Marina and north of the City of Seaside. Hazards of potential concern at CSUMB include hazardous materials and fires, particularly in the laboratories. CSUMB is in compliance with laws and regulations of the appropriate regulatory agencies and organizations.

3.7.3 City of Seaside

Hazards of potential concern in the project area include hazardous materials and fires. According to the U.S. EPA, there are 33 facilities that have reported hazardous waste activities in the City of Seaside. The approximate location of the EPA registered sites is depicted on Figure 5.6-1 of the City of Seaside General Plan EIR. Areas of northern and eastern Seaside contain unexploded ordnance and hazardous materials (military munitions) associated with past military activities (see Figures S-4 and S-5 of the Seaside General Plan, 2003, at http://www.ci.seaside.ca.us/general%20plan/gp.htm).

Leaking underground storage tanks are an environmental concern in the City of Seaside. According to SWRCB Leaking Underground Storage Tank database (September 2002), 11 leaks have been reported for the Seaside area. The remaining cases include two post remedial action monitoring cases and one leak being confirmed (City of Seaside, 2003).

3.7.4 Armstrong Ranch

According to the County of Monterey and City of Marina General Plan EIRs, there is no evidence of contamination at the Armstrong Ranch, although there is hazardous waste contamination of the groundwater northwest of the Marina Municipal Airport (referred to as Operable Unit 1, or OU-1, in the Army's records). The Monterey Regional Waste Management District's Monterey Peninsula Landfill is located north of the regional wastewater treatment plant site and has historically contributed some contamination to the soil and groundwater; however, it

is currently monitored closely to ensure that no additional contamination of the groundwater occurs.

3.8 Hydrology and Water Quality

3.8.1 Recycled Water Quality Issues

In order to assure public health protection, the California Department of Health Services has the authority and responsibility to establish statewide reclamation criteria, which was established in Title 22 of the California Administrative Code. The regulations include water quality standards for different users, treatment process requirements, operational requirements, and public health/safety requirements. The recycled water from the Reclamation Plant meets the State's Title 22 requirements for unrestricted use.

The Proposed Action would provide a pipeline to the property line of the proposed users. The users would be responsible for extending the lines onsite and complying with Title 22 requirements. Approval of "Waste Discharge Requirements" by the California Regional Water Quality Control Board would be necessary for use of the recycled water on the users' sites. The Waste Discharge Requirements would specify the user sites (including incidental use of water for construction purposes), water quality constituent levels that must be maintained, and other requirements regarding use of recycled water. These requirements state that irrigation with recycled water shall be accomplished at a time and in a manner that minimizes ponding and the possibility of public contact with sprayed materials. Irrigation typically cannot take place within 50 feet of any domestic water supply well. There are also requirements for clear identification and separation between potable and recycled facilities and lines.

3.8.2 Local Groundwater Conditions

The MCWD well systems currently utilize Salinas Valley groundwater as its primary supply source in accordance with agreements with the MCWRA (refer to Section 3.10 Water Supply of this EA). The Groundwater Inventory and Status Report (DD&A and Martin Feeney 2004), which is hereby incorporated by reference, provides an overview of groundwater conditions affecting MCWD. Both MCWD and the agricultural and municipal users throughout the basin within the MCWRA water supply system rely on wells that extract water from the Salinas Valley Groundwater Basin. The Salinas Valley Groundwater Basin, which is located generally within the alluvial portions of the Salinas Valley consists of the sand, gravel, and clay that have been deposited over millions of years. The entire Salinas Valley Groundwater Basin is one large hydrologic unit; however, the Salinas Valley Groundwater Basin also contains discrete areas that demonstrate unique characteristics differentiating them from the other areas of the basin. For this reason, the Salinas Valley Groundwater Basin has been subdivided into five hydrologic subareas.

The two subareas that are of key interest to the MCWD are the Pressure and the Forebay Subareas. The Pressure Subarea is the confined area of the Salinas Basin that underlies all of the MCWD's service area and is the subarea from which all of the District's extractions are currently derived. The Forebay Subarea is defined as the area of the basin that is not confined and which receives recharge from the surface. MCWD is currently dependent on groundwater for almost 100 percent of its supply. All of MCWD's existing supply wells are located in and extract water from the Pressure Subarea of the Salinas Valley Basin. Studies and investigations identify four aquifer systems within the Pressure Subarea. These aquifers consist of areally extensive, horizontally continuous deposits of sand and gravel that exist at various depths below ground surface in the subarea. These aquifer systems have been designated as the A-Aquifer, 180-foot, the 400-foot, and the Deep Aquifer systems. The A-Aquifer is an unconfined surficial water table aquifer that is not considered to be hydrologically connected to the underlying aquifers, since it is underlain by the Salinas Valley Aquitard, a regionally-extensive confining layer. This aquifer is not currently used as a domestic water supply source. The 180-foot and 400-foot aquifers derive their names from the average depth at which the sand and gravel deposits are encountered. The Deep Aquifer consists of an aggregation of all sand and gravel deposits that exist below the 400-foot Aquifer. The MCWD wells withdraw groundwater from the 180-foot, the 400-foot, and the Deep Aquifer systems within the Pressure Subarea of the Salinas Valley Basin. The two aquifers being used to serve the Ord Community (180-foot and 400-foot) face imminent seawater intrusion problems that are unique to the Pressure Subarea.

180-Foot Aquifer

The 180-foot Aquifer extends from Monterey Bay to Chualar beneath the Salinas Valley and westward from the valley under northern Fort Ord and the central Marina. South of Chualar and in the Forebay area, the distinction between the 180-foot and 400-foot aquifer becomes less defined as the aquitards that separate the aquifers become more discontinuous. At the coast, the sand and gravel deposits that comprise the 180-foot aquifer are exposed on the seafloor and are subject to seawater intrusion.

400-Foot Aquifer

The 400-foot Aquifer is comprised of geological materials assigned to older alluvium deposits and Aromas Sand. The aquifer system is present beneath the northern Salinas Valley and also extends westward beneath the northern portions of the former Fort Ord and central Marina. In the Forebay area, the 400-foot Aquifer locally blends with the 180-foot Aquifer receiving recharge from the river through the overlying deposits. As with the 180-foot Aquifer, the 400-foot Aquifer outcrops along seafloor of Monterey Bay and is subject to seawater intrusion.

Deep Aquifer

The Deep Aquifer System consists of two geologic formations – the Paso Robles and the underlying Purisma Formations. Much less is known about the Deep Aquifer than the 180-foot

and the 400-foot Aquifers because the aquifer system is not extensively used which limits the amount of available data on this system. MCWD utilizes three wells that extract water solely from the Deep Aquifer to supply the City of Marina distribution system. The wells serving the Ord Community do not extract water from the Deep Aquifer System. More information about the Deep Aquifer can be found in the MCWD's Deep Aquifer Study.

Extraction Patterns

Since the early 1900's combined extractions of all groundwater users in the Pressure Subarea have resulted in declining water levels. As a result of the cumulative, continuous extractions, groundwater levels have been chronically below sea level resulting in seawater intrusion (see detailed explanation below) into the 180-foot and 400-foot Aquifers in the coastal areas of the Salinas Valley. In response to the seawater intrusion that rendered the groundwater of the 180-foot Aquifer unusable, groundwater users constructed new wells into the 400-foot Aquifer. Again, extractions in excess of local recharge resulted in the occurrence of chronically depressed water levels and seawater intrusion into this aquifer. The history of the MCWD and the Ord Community well fields echoes this regional pattern. Both MCWD and Fort Ord originally had supply wells in the 180-foot Aquifer that, as a result of seawater intrusion, were replaced with wells in the 400-foot Aquifer. Eventually, the water supply wells in Marina, due to their more westerly location, had to be replaced with wells in the Deep Aquifer. The Fort Ord system still relies on wells located further inland that extract from the 180-foot and 400-foot Aquifers. However, these wells are currently threatened by seawater intrusion.

Seawater intrusion in the Salinas Valley Groundwater Basin has been documented since the 1930's. Seawater intrusion occurs when the naturally occurring offshore flow of fresh groundwater in a coastal aquifer is reversed and seawater begins moving inland. The flow reversal occurs when onshore groundwater levels are consistently below sea level as a result of extractions (i.e., cumulative pumping from wells). Regionally, water levels can drop below sea level as a result of extractions that exceed the recharge to the aquifer. On a local scale, water levels can drop below sea level because of well operations and specific aquifer properties. In the Pressure Subarea, the flow reversal allowing seawater intrusion is the result of both processes, but predominantly by large scale pumping by entities other than MCWD in the areas east and south of the MCWD boundaries.

3.8.3 Local Hydrology

The Salinas River is located immediately to the north of Reclamation Plant and the northern portion of the Proposed Action. The area north of the City of Marina is currently undeveloped, although it is used intermittently for grazing. The proposed Marina Station Mixed Use Development Project would be proposed west of the proposed pipeline. As a result, there is no existing infrastructure for the collection and disposal of storm water in that area. The proposed distribution pipeline would pass through mostly developed portions of former Fort Ord,

CSUMB, and the cities of Marina, Seaside, and Monterey, all of which have existing storm water systems that are subject to the requirements of the Clean Water Act National Pollutant Discharge Elimination System storm water regulations. These regulations include municipal and construction storm water permits, preparation of Storm Water Pollution Prevention Plans, and implementation of storm water best management practices (BMPs). The Proposed Action would also be required to comply with the local jurisdictions' drainage system regulations.

3.9 Indian Trust Assets

The United States Government's trust responsibility for Indian resources requires Reclamation and other federal agencies to take measures to protect and maintain trust resources. These responsibilities include taking reasonable actions to preserve and restore tribal resources. Indian Trust Assets (ITA) are legal interests in property and rights held in trust by the United States for Indian tribes or individuals. Indian reservations, rancheras, and allotments are common ITAs.

3.10 Land Use

Future development has been planned for the former Fort Ord military base as part of the Reuse Plan adopted in 1997 by the Reuse Authority. The Reuse Plan designates land uses and ultimate development intensities within the former Fort Ord and establishes a variety of policies to guide future development.

The redevelopment of the former Fort Ord would include residential, mixed-use commercial, retail and open space, institutional, and public land uses. In order to accommodate these land uses, the Reuse Plan identified a need for an additional 2,400 AFY of water for the former Fort Ord area and its land use member jurisdictions (County of Monterey, Cities of Marina, Monterey, Seaside, Del Rey Oaks, the University of California, Monterey Bay Education, Science, and Technology Center, and the CSUMB).

3.11 Noise

Noise is defined as unwanted or objectionable sound. State and local regulations and ordinances define objectionable noise levels and identify land use compatibility standards. Sound is comprised of three variables: magnitude, frequency, and duration. Noise is measured on the "decibel" (dB) scale. The dB scale is logarithmic. On this scale, noise at zero dB is barely audible, while noise at 120-140 dB is painful and may cause hearing damage. However, these extremes are not encountered in commonplace environments.

The human ear responds to sounds whose frequencies are in the range of 20 hertz (Hz) to 20,000 Hz. Within the audible range, subjective response to noise varies. People generally find higher pitched sound to be more annoying than lower pitched sounds. Noise is typically characterized

using the A-weighted sound level (dBA). This scale gives greater weight to the frequencies that the human ear is most sensitive.

Annoyance due to noise is often associated with how long noise persists. To adequately describe a noise environment, it is necessary to quantify the variation in noise levels over time. Acoustical engineers often use a statistical approach that specifies noise levels that are observed to be exceeded over a given percentage of time.

For evaluating noise over extended periods, the "Day-Night Noise Level" scale (L_{dn}) and the "Community Noise Equivalent Level" (CNEL) are measures of the average equivalent sound level (L_{eq}) during a 24-hour period. The L_{eq} can be thought of as the steady sound level that, in a stated period of time, would contain the same acoustic energy as the time-varying sound level during the same period. These measures of noise account for greater sensitivity of noise receptors at night by adding 5 dB during evening hours (7:00 p.m. to 10:00 p.m.) and/or 10 dB to nighttime noise levels (10:00 p.m. to 7:00 a.m.).

The Noise Element of the Cities' and County's General Plans contain guidelines for determining noise/land use compatibility. Based on these guidelines, sensitive noise receptors are identified as residential uses, transient lodging (hotels/motels), schools, libraries, churches, hospitals, and nursing homes. Sensitive receptors, consisting of residences, are located along the proposed trunk and lateral recycled water pipelines. No sensitive receptors are located adjacent to the proposed pump stations. The storage reservoir and tank do not constitute a source of substantial noise.

3.11.1 Regulatory Framework

There are three key tools used by cities and counties to regulate noise: 1) the land use compatibility matrix, 2) the noise standards, and 3) the noise ordinances. These tools are used at different stages of development. The land use compatibility matrix is used during the planning process, the noise standards are most applicable during the construction and design phase, and the noise ordinance is applied during construction and the life of the development. The land use compatibility matrix and noise standards are usually part of the Noise Element for each individual city and, in this case, are only applicable to the site of the existing and proposed desalination plants and the surface storage reservoir. The noise ordinance is usually adopted as a code.

Noise Elements of General Plan sometimes contain land use compatibility matrices. The matrix identifies noise zones for each land use and rates them as normally acceptable, conditionally acceptable, normally unacceptable, or clearly unacceptable. Normally acceptable deems specified land uses satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

The California Noise Insulation standards (contained in the Uniform Building Code) require that multi-family dwellings (apartments and condominiums), hotels, and motels be designed to meet a 45 CNEL indoor noise standard to reduce the effects of ambient noise sources, such as roads, railroads, and aircraft over-flights. The County of Monterey enforces these standards and applies a 45 CNEL indoor standard on single family homes. These are the only noise standards the County has adopted. They are applied during the permit process for new construction. The applicant is required to submit an acoustical report that shows any appropriate building upgrades (e.g., window glazing, insulation, attic vent baffles) necessary to meet indoor noise standards. Many jurisdictions have also adopted indoor noise standards for uses other than residential and have adopted outdoor noise standards for certain uses, such as the private exterior spaces of residences and public park spaces.

The purpose of municipal noise ordinances is to control noise sources located on private property. The noise ordinance cannot control noise generated by vehicles on public property, aircraft noise, or railroad noise, because regulation of these sources is preempted by state and federal laws. However, the noise ordinance establishes upper limits on noise levels from any source on private property. It can establish limits on industrial noise, noise from commercial uses, parking lot noise, music, public address systems, and any noise generated on private property. Noise limits are usually imposed at the property line. Noise limits have already been established for the County of Monterey and its cities. Table 3-6 presents the noise limit requirements for each jurisdiction.

Table 3-6 Maximum Noise Limit Requirements

MAXIMUM NOISE LIMIT REQUIREMENTS (L_{dn} dBA)								
	Marina[1]		City Seaside [2]		Monterey [3]		County Monterey [4]	
Uses	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor
Residence	45	60	45	65	NA	65	NA	55
Live/Work	50	65	45	70	NA	65	NA	55
Hotel/ Motel	50	65	45	70	NA	65	NA	55
Office	55	65	50	70	NA	70	NA	60
Industrial	60	70	55	75	NA	75	NA	70
School, Library	45	60	50	50	NA	70	NA	55
Parks, Playfields	NA	65	50	70	NA	70	NA	60

[1] City of Marina General Plan Policy 4.108 and 4.109
[2] City of Seaside General Plan Policy N-1.1, N-2.1, and N-3.1
[3] City of Monterey General Plan Policy 6
[4] County of Monterey General Plan Policy HS-5.1 – HS-5.7

3.11.2 Existing Noise Environment

City of Marina

Potentially significant sources of noise within the Marina Planning Area include vehicular traffic, airport operations, and industrial-type uses such as the wastewater treatment plant and landfill operations. Traffic on roadways is the major source of noise within the City of Marina. This includes Highway 1, Del Monte Boulevard, Reservation Road, Blanco Road, and Imjin Road.

General Plan policies contained in the Community Land Use Element are designed to avoid conflicts between noise-sensitive uses (in particular, residence, and schools) and major noise sources. The plan specifies the maximum acceptable sound levels for various land uses that are identified in Table 3-6.

Monterey County

Following the closure of Fort Ord, roadway traffic and aircraft using local airports remain the primary existing sources of noise in the County. Sensitive receptors along the proposed pipeline during construction include single- and multi-family residences near the Del Monte Golf Course, which is within the Monterey County jurisdiction.

The noise element for the Monterey County General Plan identifies goals, objectives, and policies related to noise. The County uses the land use compatibility guidelines described above to guide planning in the County. Monterey County objectives aim to "protect noise-sensitive land uses by seeking to prevent noise conflicts, ensure a quiet acoustical environment, and identify maximum acceptable noise levels compatible with land use designations."

City of Seaside

Noise from transportation activity is the primary component of the noise environment in Seaside. Transportation noise is related to the major transportation corridors that traverse the community. Land uses adjacent to certain segments of Broadway Avenue, Canyon Del Rey Boulevard, Del Monte Boulevard, Fremont Boulevard, Highway 1, and Lightfighter Boulevard are located within a 65 dBA or higher noise contour. This means that persons living or attending schools in these areas may be subject to noise levels exceeding the City's standards.

Aircraft activities at Monterey Peninsula Airport do not adversely affect Seaside, since the approach and takeoff areas are over rural areas to the east and Monterey Bay to the west. A small portion of the City is currently within a 65 dBA contour overlay associated with aircraft over-flights from the airport; however, this area of the City is mainly designated as open space.

The Noise Element addresses noise sources in the community and identifies ways to reduce the impacts of these noise sources. The Element contains policies and programs to achieve and maintain noise levels compatible with various types of land uses. The plan designates land uses exposed to exterior noise levels exceeding 60 dBA as being noise impacted.

City of Monterey

According to the 2004 City of Monterey General Plan, the major noise sources in the City of Monterey are motor vehicles (autos, trucks, buses, and motorcycles), aircraft, and commercial/industrial uses. The roadways with the highest noise levels in the city and within the Recycled Water Alternative area are Highway 1 and Highway 68. Although traffic volumes would continue to increase, the noise from these two sources is projected to decrease because of the increasingly stringent California and federal motor vehicle noise standards that require new, quieter aircraft and aircraft operational changes. Monterey Peninsula Airport is the largest commercial airport in the county. Noise levels from airport operations greater than 65 CNEL currently extend into residential areas in the neighboring cities.

The goal of the Noise section of the City of Monterey General Plan is to "provide policies and programs to help reduce noise levels and to protect the citizens of Monterey from the harmful and annoying effects of noise."

3.12 Socioeconomics Resources

For the purposes of this analysis, data collected from the U.S. Census 2000 has been compiled for the Cities of Monterey, Marina, Seaside, and Del Rey Oaks in the County of Monterey, California in order to evaluate the socioeconomic conditions in the area of the Proposed Action.

Table 3-7 presents population figures for the area. Based on Census 2000 data, Monterey County had a population of approximately 401,762 people. The County's population has grown at an overall rate of 1.2 percent annually since 1990. Table 3-8 shows the total residential units and housing characteristics of the area.

Table 3-7 Population Summary

POPULATION SUMMARY	
Place of Residence	**Population**
City of Marina	25,101
City of Seaside	31,696
City of Del Rey Oaks	1,650
City of Monterey	29,674
Monterey County Total	401,762
Source: U.S. Census, 2000	

Table 3-8 Characteristics of Area Housing

CHARACTERISTICS OF AREA HOUSING				
Housing Statistics	**Monterey**	**Marina**	**Seaside**	**Del Rey Oaks**
Total Housing Units	13,420	8,543	11,005	727
Persons Per Household	2.13	2.79	2.34	3.21
Owner-Occupied	4,176	2,578	3,863	457
Renter-Occupied	7,752	3,640	5,505	162
Source: U.S. Census, 2000				

Table 3-9 presents a breakdown of employment in different industry sectors in the Cities of Monterey, Marina, Seaside, and Del Rey Oaks in 2000. The categories with the largest number of jobs in the Proposed Action study area include education, arts, retail, and professional. Projections for the non-farm industry in Monterey County between 2002 and 2012 suggest that the largest changes would be in the services industry, which could increase by approximately 10,400 jobs, mainly in food service industry.

Table 3-9 Employment by Industry

EMPLOYMENT BY INDUSTRY				
Employment Sector	**Year 2000**			
	Monterey	**Marina**	**Seaside**	**Del Rey Oaks**
Agriculture	178 (1.3%)	343 (3.6%)	332 (2.6%)	5 (0.5%)
Construction	831 (6.0%)	636 (6.7%)	841 (6.6%)	78 (8.2%)
Manufacturing	494 (3.5%)	495 (5.2%)	607 (4.7%)	22 (2.3%)
Wholesale	340 (2.4%)	199 (2.1%)	249 (1.9%)	20 (2.1%)
Retail	1,752 (12.6%)	1,212 (12.8%)	1,516 (11.8%)	133 (14.0%)
Transportation	352 (2.5%)	287 (3.0%)	379 (3.0%)	24 (2.5%)
Information	728 (5.2%)	339 (3.6%)	324 (2.5%)	33 (3.5%)
Finance	821 (5.9%)	528 (5.6%)	476 (3.7%)	44 (4.6%)
Professional	1,575 (11.3%)	693 (7.3%)	1,459 (11.4%)	118 (12.4%)
Education	3,450 (24.8%)	1,945 (20.6%)	1,920 (15.0%)	202 (21.2%)
Arts	2,194 (15.7%)	1,405 (14.9%)	3,095 (24.1%)	133 (14.0%)
Public Admin	689 (4.9%)	729 (7.7%)	548 (4.3%)	86 (9.0%)
Other Services	529 (3.8%)	635 (6.7%)	1,076 (8.4%)	55 (5.8%)
TOTAL	13,933	9,446	12,822	953
Source: U.S. Census 2000.				

In 2000, Monterey County's median household income was $48,305 compared to the City of Del Rey Oaks at $59,423, which has the highest median household income in the study area. The City of Seaside had the $41,393, which has the lowest median household income for the study area at $41,393.

3.13 Water Supply

Two regional water management agencies have responsibility over water supply planning and management within the Proposed Action area. The MCWRA is responsible for the planning and management of water resources from the Salinas Valley Groundwater Basin, which is the source of the majority of the water to the former Fort Ord and all the MCWD's groundwater supplies. The Monterey Peninsula Water Management District (Water Management District) is responsible for issuing water connection permits for development within their boundaries, as well as managing and regulating the use, reuse, reclamation, and conservation of water within its boundaries on the Monterey Peninsula. The Water Management District boundaries for water management include the Seaside Groundwater Basin. MCWD issues water connection permits, managing the delivery and conservation of potable and recycled water for development in the City of Marina and within all of the former Fort Ord (i.e., the Ord Community Service Area). Two regional water management agencies have jurisdiction over groundwater production in the vicinity of the MCWD. The MCWRA is responsible for regulation and supply of water from the Salinas groundwater basin. The Water Management District is responsible for regulation and supply of water from the Seaside groundwater basin. These two basins are adjacent to each other under Ord Community lands.

3.13.1 Marina Coast Water District Water Supply

MCWD is authorized by Division 12 of the California Water Code. The MCWD was formed in 1960 and has consistently provided potable water and wastewater treatment services to customers in its service area. MCWD has historically served approximately 8,000 customers annually in the City of Marina.

In 1996, MCWD was selected by the Reuse Authority to take over conveyance of the water and wastewater systems at the former Fort Ord military base. The former base consists of approximately 28,000 acres incorporating portions of the cities of Seaside, Monterey, Del Rey Oaks, Marina, and portions of unincorporated Monterey County. In November of 2001, water and wastewater systems were conveyed through a Public Benefit Conveyance to MCWD. MCWD is now responsible for providing water and wastewater service throughout the former Fort Ord military base. Similarly, California American Water Company and several smaller water companies are responsible for providing water service to the areas south and west of the former Fort Ord within the Proposed Action area.

MCWD's potable water supply is the Salinas Valley Groundwater Basin. MCWD's recent groundwater production is shown in Table 3-10.

Table 3-10 MCWD Ground Water Production

MCWD GROUND WATER PRODUCTION (in Acre-Feet per Year or AFY) 1998 – 2008		
Year	**City of Marina* Service Area**	**Ord Community Service Area (former Fort Ord)**
1998	**2160**	N/A
1999	2241	2396
2000	2300	2371
2001	2285	2228
2002	2312	2150
2003	2185	2146
2004	2266	2420
2005	2195	1994
2006	1786	2509
2007	1622	2941
2008	1833	2269
Sources: Byron Buck & Associates, Nov. 2005; James Derbin, April 2009. * Marina's numbers include some water from the MCWD desalination plant prior to 2004.		

The Salinas Valley Groundwater Basin has experienced seawater intrusion as a result of extensive agricultural irrigation pumping near the coast. To retard the advancement of seawater intrusion, the Pollution Control Agency in partnership with the MCWRA built two projects: 1) a water recycling facility at the Regional Treatment Plant and 2) a reclaimed water distribution system. These facilities are known locally as the Reclamation Project and Castroville Seawater Intrusion Project, respectively. The projects were completed in 1997 and are known collectively as the Monterey County Recycled Water Projects.

In a 1996 Agreement between MCWD, MCWRA, Pollution Control Agency, and several property owners, MCWD was granted a right to receive reclaimed water from the Reclamation Project, although no more than 300 acre-feet could be obtained during the months of April through September. During the remainder of the year, the MCWD was entitled to take its full entitlement to reclaimed water as stipulated in previous agreements. Specifically, MCWD has the right to obtain tertiary treated wastewater for reuse from the Pollution Control Agency in quantities equal to the volume of MCWD wastewater treated by the Pollution Control Agency.

The Army, on behalf of the United States, entered into a Memorandum of Agreement for the Annexation of Fort Ord into Zones 2 and 2A of the MCWRA. The agreement established a maximum withdrawal of 6,600 AFY of groundwater from the Salinas Basin, provided no more than 5,200 AFY are withdrawn from the 180-foot and the 400-foot aquifers, with the remaining 1,400 AFY coming from the deep aquifer. As a part of the Reuse Plan, an allocation from the 6,600 AFY was provided for each of the jurisdictions. Table 3-11 presents the current allocation

of potable water supplies by jurisdiction, in addition to MCWD other allocations for areas outside the former Fort Ord.

Table 3-11 Institutional Water Supply Currently Authorized to MCWD

INSTITUTIONAL WATER SUPPLY CURRENTLY AUTHORIZED TO THE MCWD	
Former Fort Ord Reuse Authority Allocation (Groundwater) as of 2005	**Annual Acre-feet Allotment or supply**
City of Marina	**1,175**
City of Seaside	**862**
CSU Monterey Bay	1,035
University of California MBEST Center	**230**
City of Del Rey Oaks	92.5
City of Monterey	65
County of Monterey	560
Army	1,577
State Parks and Recreation	45
City of Marina (sphere)	10
Allowance for line losses (10%)	532
Reuse Authority Strategic Reserve	413.5
Rounded subtotal:	*6,600*
City of Marina + Areas Outside Former Fort Ord (Groundwater)	
City of Marina (Central Marina)	**3,020**
Armstrong Ranch	920
Lonestar Property	500
Rounded subtotal:	*4,440*
Other Water Sources	
MCWD Desalination Plant	*300*
Total	**11,340**
Source: Byron Buck, November 2005.	

3.13.2 Monterey Peninsula Water Supply

Those cities that may benefit from the delivery of water to the Monterey Peninsula (Monterey, Seaside, and Del Rey Oaks) are within the Water Management District, which is responsible for issuing water connection permits for development within their boundaries and managing and regulating the use, reuse, reclamation, and conservation of water within its boundaries on the Monterey Peninsula. About 80 percent of the water collected, stored, and distributed within the Water Management District boundaries is done so by the Cal-Am, which serves approximately 95 percent of Monterey Peninsula residents and businesses. Water supplied by Cal-Am is obtained from wells in the Carmel Valley and Seaside aquifers and from the Los Padres and San Clemente Reservoirs located on the Carmel River.[5] Approximately 70 percent of the water is diverted from the Carmel River Basin. Cal-Am's Monterey Division service area includes the

[5] Please note that while a portion of Cal-Am's water comes from wells in the Carmel River basin, this water is considered groundwater under the direct influence of surface water and, therefore, considered by the State to be surface water.

communities of Carmel, Sand City, the Monterey Peninsula Airport District, portions of the unincorporated areas of Monterey County, including Carmel Valley Village and Pebble Beach, and the non-Fort Ord portions of the cities of Seaside, Monterey, and Del Rey Oaks. As discussed above, the areas of the Proposed Action within the former Fort Ord and the remainder of the City of Marina are served by MCWD.

3.14 Wastewater

The provision of sanitary sewer or wastewater service in the proposed project area is organized at two levels. Local cities and sanitation districts are responsible for maintenance and extension of sewer lines, and the Pollution Control Agency is responsible for development and operation of treatment facilities. The wastewater systems in Monterey, Seaside, Marina, and the former Fort Ord are maintained and operated by the City of Monterey Public Works Department, Seaside County Sanitation District, and the MCWD, respectively. Wastewater is carried by the sanitary collection systems of these jurisdictions to the Pollution Control Agency pump stations. From local pump stations, the wastewater is pumped to the Pollution Control Agency regional wastewater treatment plant located two miles north of Marina. The Pollution Control Agency treats approximately 20 million gallons per day (MGD) of raw wastewater flow and currently produces approximately 13.6 MGD (15,000 AFY) of recycled water. The Pollution Control Agency services a population of approximately 252,000 people. Collection into the regional system, from the local systems, is achieved by the use of force mains and pump stations. The plant was constructed with a permitted capacity of 29.6 MGD. Several MGD of capacity are still available to meet future demand, and expansion of the treatment plant is not anticipated to be necessary in the near future. Future infrastructure improvements would focus on the collection system.

The Pollution Control Agency operates the water recycling facility at the treatment plant and manages the distribution system under contract with the MCWRA. It also maintains 25 wastewater pump stations that transport raw wastewater to the treatment plant. A 1992 agreement between the Pollution Control Agency and MCWRA requires delivery of the first 19,500 AFY of reclaimed water to MCWRA for use in the Castroville Seawater Intrusion Project. The wastewater system at the Pollution Control Agency regional treatment plant provides primary, secondary, and some tertiary treatment of wastewater. Tertiary treatment is the process that treats wastewater for reuse. Tertiary treatment processes at the Reclamation Plant include flocculation basins in which chemicals are added that cause remaining particulate contaminants to clump together, filters that remove the solids formed in the flocculation basins by trapping them in beds of gravel, sand, and anthracite coal, and chlorine contact tanks where wastewater is disinfected for at least 90 minutes to ensure that it is safe for irrigation. If discharge of recycled water to an ocean outfall line is necessary, it is either held until chlorine is dissipated or returned to the headworks, re-treated, and discharged as secondary effluent.

Section 4 Environmental Consequences

4.1 Air Quality

4.1.1 No Action

The No Action Alternative would involve no physical changes to the environment, no construction activities, no operational electricity use, and therefore, no air quality effects.

4.1.2 Proposed Action

The primary sources of construction-related dust emissions would be grading and excavation operations, road construction, and building construction. Fugitive dust from potential grading, remediation, and construction is expected to be short-term and would cease following completion of construction activities. In addition to impacts resulting from dust generation, construction equipment exhaust would also contribute to short-term air quality impacts. Primary sources of short-term particulate matter, reactive organic gases (ROG), NO_x, and TAC emissions would be gasoline and diesel-powered heavy-duty mobile construction equipment. In order to reduce particulate matter emissions, the contractors would adhere to the dust and emission control BMPs provided in Section 6.2 of this EA.

Grading and construction for this project would involve substantial numbers of large diesel trucks and equipment operating under load that would emit diesel exhaust, including diesel particulate matter, a TAC. However, as needed during project construction, MCWD and the contractor would implement measures to reduce or eliminate diesel exhaust emissions, such as reduction in hours of operation or by utilizing oxidation catalysts or catalytic particulate matter filters on appropriate diesel powered equipment as described in Section 6.2 of this EA.

The operation of recycled water storage and pipeline facilities would result in negligible long-term (operational) air quality emissions, which would predominantly be attributable to minor increases in electricity consumption and periodic vehicle trips by employees for maintenance and operation of the facilities. Operation of the proposed water storage and pipeline facilities would require the use of electrical pumps that would result in regional emissions of criteria pollutants associated with the generation of electricity. The pump station at Reclamation Plant would require up to three 250 hp electrical pumps; however, the air quality analysis conservatively assumed five 300 hp pumps. The 3rd Street and 5th Avenue Station would require up to three 200 hp electrical pumps, while the air quality analysis assumes four at 200 hp (at Lightfighter rather than 3rd Street/5th Avenue). These energy consumption emissions would be minimal given the rating and use of these pumps. Any increased electricity generation would occur at local and regional power plants (some outside the NCCAB), and the emissions from these plants would not be allowed to exceed their permit limits.

Climate Change and Greenhouse Gas Emissions

This section addresses the effects of development under the proposed action on global greenhouse gas emissions and the potential for these emissions to cumulatively contribute to global climate change. The issue of climate change is inherently a cumulative issue on a global scale, and as such, it is not currently possible to determine the significance of the contribution of the proposed action to global temperature increases. Science is not currently sophisticated enough to measure the influence of a City's contribution to climate change as reflected in the following statement by the IPCC, "difficulties remain in attributing temperature on a smaller than continental scales and over time scales of less than 50 years. Attribution of these scales, with limited exception, has not been established."[6] Therefore, we cannot currently determine the significance of the size of the area of potential affect if it can generate by itself enough greenhouse gas emissions to measurably influence global climate change. A project contributes to a potentially adverse effect by its incremental contribution to the cumulative increase in greenhouse gas emissions from all sources, which together can produce measurable global climate changes. Therefore, this analysis focuses on the project's cumulative contribution to the global inventory of greenhouse gas emissions, as well as the effect that climate change would have on the area of potential affect.

Recent changes in mean temperature and precipitation are evidence of the changes already taking place in the frequency and intensity of climate extremes. Worldwide, adverse impacts of climate change are expected to negatively affect agriculture and food security, water resources, coastal zones, public health, climate-related disaster risk management, and natural resources management.[7] According to the Climate Action Team Report to Governor Schwarzenegger and the Legislature, California faces similar adaptation challenges due to impacts of climate change. Specifically, California is facing public health impacts, reduced snowpack, increased flood hazards, sea-level rise, and increased risk of wildfires.[8] Adaptation to these climate change impacts is a complementary strategy to mitigating greenhouse gas emissions for effectively managing climate change risks.

Up to seven electrical pumps would be used as part of the Proposed Action, which would emit potential greenhouse gases associated indirectly with the generation of electricity. Table 4-1 shows the greenhouse gas emissions due to electricity consumption by the pump stations. This analysis is a good faith estimate at emissions associated with project operation. The greenhouse gas emissions due to employee inspection and maintenance trips to the various system

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[6] IPCC, 2007. G.C. Hegerl, "Understanding and Attributing Climate Change Chapter 9, Contribution of Working Group 1 to the Fourth Assessment Report of the Intergovernmental Panel of Climate Change.

[7] United Nations Development Programme, Programming Climate Change Adaptation, www.undp.org/gef/adaptation/climate_change/02.htm, accessed March 28, 2008.

[8] Climate Action Team, California EPA, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, pp. 19-39.

components is not included, nor does it include the end users requirements to boost pressures to meet their specific irrigation use of the recycled water. Existing wastewater treatment plant emissions and changes to those emissions are also not included, due to the unknown relative contribution of those emissions attributable to the existing recycled water users versus the proposed M&I users that are currently not defined with any accuracy. In addition, this estimate does not account for construction emissions and life cycle costs for construction materials. Construction-related emissions would occur only once (would not be generated throughout the life of the project as is the case with emissions associated with electricity use).

Table 4-1 Greenhouse Gas Emissions from Operational Electricity Consumption

Greenhouse Gas	Emission Factor (lbs/kWh)	Electricity Demand (MWh/yr)*	Emissions in metric tons per year (MT/yr)	Global Warming Potential**	CO_2e (MT/yr)
CO_2	0.524	1,930	459	1	459
CH_4	0.0000067		0.006	23	0.14
N_2O	0.0000037		0.003	296	0.96
Total greenhouse gas emissions from electricity demand (MT/yr CO_2e)=					460

* Source for electricity demand: Anne Prudhel, Carollo Engineers, April 30, 2009 and Nuria Bertran Ortiz, RMC Water and Environment, May 1, 2009.
** Per the IPCC, Third Assessment Report, June 2008.
Notes: Megawatt hour (MWh); pounds (lbs); metric tones (MT); year (yr)

The amount of CO_2e (460 metric tons per year) that is likely to be emitted for operation of the proposed project and would have negligible effects on climate change based upon the scale of global emissions of greenhouse gases. The project is environmentally preferable to most other new water sources and would be serving existing water demands and thus reducing the future reliance on potentially more energy intensive sources of water.

Impacts of Global Climate Change on the Project

Global climate change is expected to effect water resources in California overall and, in particular, areas that rely upon the Sierra Nevada snowfall and snow pack. Because this Proposed Action is in an area that does not rely on this source of water, it would experience less of an impact due to this phenomenon. In addition, global climate change may influence many interconnected phenomena, which would in turn affect the rate of climate change itself. Besides effects on water supply for areas served by Sierra Nevada precipitation, the following are other global climate change issues:

- Water supplies available in surface reservoirs
- Water demand
- Surface water quality
- Groundwater quality or recharge characteristics
- Fisheries and aquatic resources

- Sea levels
- Flooding/flood control
- Sudden temperature and other climatic changes

It can be assumed that under a long-term cumulative condition, one or more of the above adverse conditions may occur. The following conclusions can be supported by evidence based on analysis and information provided in other sections of this EA. Affects related to water supply quantities and qualities would not impact the Proposed Action due to the type of project.

- Based on the type of Proposed Action, and the project site's climate, the effects of increased electricity demand on peak days would not adversely affect the project.
- The Proposed Action may be subject to larger or more frequent flooding events and or the effects of sea level rise that may damage the project components. However, this is not considered an adverse effect because the project would not provide essential life-supporting services or facilities to people. Further, a flood causing damage to the recycled water facility would not otherwise result in a risk of life, injury, or death.
- The Proposed Action would not subject people to future worsening of air quality because the local vicinity experiences year round good air quality which rarely, if ever, exceeds ambient air quality standards established to protect public health.
- Impacts on fisheries and aquatic resources due to climate change may impact the types of foods available to all people; however, this would not create an adverse effect to the Proposed Action facilities.
- Severe weather events may affect the Proposed Action, but not such that an adverse public health or environmental effect can be reasonably identified.

4.2 Biological Resources

4.2.1 No Action

The No Action Alternative would result in no physical changes to the region and, therefore, would have no effects on biological species or habitat.

4.2.2 Proposed Action

Federally listed plant and wildlife species known or with the potential to occur within the APE, along with their legal status, habitat requirements, and statement of the likelihood to occur in the APE based on previous environmental analysis conducted for the RWP, site-specific and protocol-level surveys, and the species list provided for the Project by USFWS (memorandum dated March 23, 2007) are included in Appendix A. Only two federally-listed species have the potential to be affected by the Proposed Action:

- California Tiger Salamander (*Ambystoma californiense*), listed as Threatened
- Monterey Spineflower (*Chorizanthe pungens* var. *pungens*), listed as Threatened

No other federally listed species are expected to occur within the Action Area or be affected by the Project, so no further consideration is given to the remaining species included in Appendix A.

On March 28, 2007, DD&A conducted protocol-level aquatic sampling at the agricultural water storage basin located on the eastern side of Armstrong Ranch (outside of the APE) and identified 13 larvae and 5 eggs, which were preliminarily identified as potentially CTS. With permission from the USFWS, DD&A collected genetic material (i.e., tail tips) from 27 salamander larvae on May 23, 2007. The genetic material was preserved and transported to the University of California, Davis laboratory of Dr. H. Brad Shaffer.

Dr. Shaffer concluded that the genotypes of salamanders present within the agricultural basin are comprised primarily of introduced alleles. The data suggests that the site has been subjected to invasion by introduced non-native tiger salamanders. Given that the agricultural basin is relatively young (approximately 10 years old) and that there are extremely low levels of native CTS alleles present, native CTS individuals are unlikely to be encountered in this population. As a result, through Section 7 consultation, Reclamation is requesting concurrence from the USFWS that the tiger salamander population at the agricultural basin is not protected under the federal ESA, and the RWP is not expected to adversely affect CTS.

Monterey spineflower was identified during focused botanical surveys conducted in 2007 within the Armstrong Ranch portion of the RWP. Approximately 0.22 acres of low to medium density populations of Monterey spineflower was identified along the alignment from the proposed Reclamation Plant pump station to Crescent Avenue. This portion of the alignment is not covered under the USFWS's existing BOs with the Army; therefore, Reclamation will include the potential effects to Monterey spineflower in their Section 7 consultation process.

The Proposed Action is not within designated critical habitat for CTS, Monterey spineflower, or within designated or proposed critical habitat for any other federally listed species, and would not affect designated or proposed critical habitat for any listed species.

Potential impacts to raptors and other special-status avian species protected under the MBTA have been identified and would be mitigated through implementation of the environmental commitments presented in Section 6.3 of this EA.

The Proposed Action would not result in any additional biological impacts than were identified in the RUWAP EIR and subsequent Addendums. The adoption of the Mitigation Monitoring Program for the RUWAP EIR requires the implementation of conservation and minimization measures, which are included in Section 6 Environmental Commitments of this EA. The

measures contained in Section 6.3 would ensure that environmental effects on biological resources are adequately reduced.

The increased use of recycled water would not change the quality of effluent discharged, although there would be a reduction in the quantity of ocean discharge from the Regional Treatment Plant on an annual basis (refer to discussion under 4.7 Hydrology and Water Quality). The change in the quantity of water discharged would not adversely affect marine resources.

4.3 Cultural Resources

4.3.1 No Action

The No Action Alternative would result in no physical changes to the region and, therefore, would have no effects on cultural resources.

4.3.2 Proposed Action

Based upon the background research and the field reconnaissance, the project APE contains no identified cultural resources; therefore, the project would have no effect on historic properties pursuant to 36 CFR part 800.4(d)(1). The City of Monterey portion of the main and laterals were rerouted early in this project to avoid impacts to several nearby prehistoric sites, specifically CA-MNT-373, CA-MNT-372, and CA-MNT-955.

Even though the proposed project alignment has been placed outside of recorded site boundaries and no surface evidence of cultural resources is visible in the exposed soil in or adjacent to the APE nearest to those site boundaries, the proximity of the APE to these three prehistoric sites has caused concern for some Native Americans. There remains a slight potential for an unexpected discovery of previously unidentified cultural materials under existing pavements or development fill in the vicinity of these sites. The environmental commitments contained in Section 6.4 of this EA would ensure that environmental effects would be adequately reduced.

4.4 Environmental Justice

4.4.1 No Action

The No Action Alternative would involve no physical changes to the environment and no environmental effects. The No Action Alternative would not disproportionately affect low-income and minority populations.

4.4.2 Proposed Action

Low Income

No census tracts contain low-income populations in excess of 50 percent. Therefore, the environmental impacts associated with the Proposed Action would not disproportionately affect low-income populations.

Minority

As identified in Table 3-4**,** the City of Marina, the closest urban area to the Reclamation Plant, has a minority population of 14,122 (56.26 percent). In addition, the City of Seaside has a minority population of 16,097 (50.79 percent). As identified in Table 3-5**,** the following six census tracts located within these two cities contain a high minority population (in excess of 50 percent): 135, 137, 138, 141.01, 141.02, and 142.

Of the six high minority population areas, only five would be directly affected by the Proposed Action. One high minority population census tract, 137 in Seaside, is located within the area of Proposed Action, but is not located adjacent to areas that would be physically affected. The 5th Avenue Pump Station, in the City of Marina, is in the 141.01 census tract, which has a minority population of 4,977 (59.81 percent). Additionally, the Blackhorse Reservoir, in the City of Seaside, has a minority population of 16,097 (50.79 percent). Additional high minority census tract areas that would be affected by the addition of the new distribution system are census tracts 135 (54.88 percent) in the City of Seaside, 138 (71.5 percent) in the City of Seaside, 141.02 (65.19 percent) intersecting the Cities of Monterey and Seaside, and 142 (55.48 percent) in the City of Marina.

Issues of environmental concern within the area of the Proposed Action include the pump stations at the Reclamation Plant site and at 5th Avenue, as well as the Blackhorse Reservoir near Ardennes Circle in the City of Seaside. These three sites would require additions to existing infrastructure or new construction. Physical impacts associated with the Proposed Action that could be disproportionately distributed to specific areas of high minority populations identified above would be air quality, hazardous materials, and noise impacts. According to analysis of these issues in Sections 4.1, 4.6, and 4.10 of this Draft EA, respectively, the Proposed Action with environmental commitments presented in Section 6 of this EA would not result in substantial physical impacts.

Although there are census tracts and areas of high minority populations within areas affected by the Proposed Action, the physical impacts associated with the Proposed Action would be minor with implementation of environmental commitments. Therefore, no disproportionate impacts on minority populations would result from the Proposed Action construction and operation activities.

4.5 Geology and Soils

4.5.1 No Action

The No Action Alternative would result in no physical changes to the region and, therefore, would have no effects on geology and soils.

4.5.2 Proposed Action

During the life of the project, pipelines and other structures proposed by the RWP may be subject to seismic hazards, such as high ground accelerations, ground shaking, and liquefaction. Intense ground shaking from earthquakes on nearby faults could result in rupture of the proposed pipelines, if not properly designed. In the unlikely event that rupture of the pipeline occurs, leakage of reclaimed water could occur. Pipeline design and materials would be selected to provide the best performance and least susceptibility to rupture resulting from seismic ground shaking. MCWD, the contractor, and the engineer, as appropriate, would develop emergency response procedures in order to control and stop the release of recycled water in the event that seismic ground shaking causes a leak or rupture in the earthen or tank reservoirs or pipelines. The Proposed Action would not result in any additional geologic impacts beyond those identified in the RUWAP EIR.

MCWD has adopted environmental commitments for reducing impacts to geological resources from the RUWAP EIR, 4.7-R1 to 4.7-R3. Therefore, potential impacts to geological resources from the Proposed Action would be mitigated through implementation of the environmental commitments contained in Section 6.5 of this EA.

4.6 Hazards and Hazardous Materials

4.6.1 No Action

The No Action Alternative would involve no physical changes to the environment and no effects associated with hazards or hazardous materials.

4.6.2 Proposed Action

The Proposed Action would involve the storage, handling, and use of hazardous materials associated with the construction of the pipelines, pump stations, and reservoir. Ordinance and explosives may be present along one or more of the pipeline distribution routes within former Fort Ord. All soil (chemical) contamination sites have been remediated to unrestricted use (i.e., residential) within the Former Fort Ord, and no restrictions are required. For areas recommended or required by Army's U.S. Army, Base Realignment and Closure Fort Ord (see EPA Superfund Record of Decision; EPA ID CA7210020676, dated 4/6/05), an Ordnance recognition class must be given to all construction workers doing ground disturbing activities. Implementation of the Proposed Action must comply with federal, state, and local laws and regulations. Therefore,

compliance with laws and regulations regarding hazards and hazardous material impacts due to the use of hazardous materials associated with the Proposed Action are not anticipated.

The proposed pipeline would not involve the use or transport of substantial amounts of hazardous materials or hazardous wastes, nor result in any hazardous emissions. Design and siting of future connections to the recycled water line would be in accordance with State and local regulations to prevent public health risk exposure. All surficial soil contamination within the Superfund sites at the former Fort Ord has been remediated. Groundwater contamination still exists, but shallow trenching would not affect or be in contact with the groundwater contamination.

The pipeline would be located within 0.25 mile of numerous schools, including some within the former Fort Ord Community (See Table 4.8-1 in the RUWAP EIR). The pipeline construction may require the handling of hazardous materials during construction. No impact is anticipated because the project must comply with regulations for the use and disposal of hazardous materials during construction.

MCWD has adopted environmental commitments for reducing impacts to the environment from hazards or hazardous materials from the RUWAP EIR, 4.8-R1 and 4.8-R2. Therefore, potential impacts to the environment from the Proposed Action would be mitigated through implementation of the environmental commitments contained in Section 6.6 of this EA.

4.7 Hydrology and Water Quality

4.7.1 No Action

The No Action Alternative would not allow for replacement water (in this case, recycled water) for the existing use of ground water. This would eliminate the potentially beneficial effect of reducing pumping and slowing seawater intrusion, thus the No Action Alternative would have potentially greater adverse effects on groundwater. Because there would be no physical changes to the environment (i.e., no construction), this alternative would not impact surface water hydrology or quality.

4.7.2 Proposed Action

The Proposed Action would not change the recycled water production processes at the Reclamation Plant; the project would simply modify existing infrastructures to allow for the diversion of produced recycled water from the plant via the WAPP and into the Proposed Action pipeline. At present, secondary treated wastewater is discharged from the Regional Treatment Plant via a diffuser positioned 11,260 feet offshore at a depth of approximately 100 feet to Monterey Bay. In summer months, the secondary treated effluent is reclaimed at the Reclamation Plant for agricultural irrigation.

As planned, the Proposed Action would not change the Reclamation Plant's operations during most of the year. Operations would continue per current conditions during the winter as neither the agricultural irrigators nor the urban irrigators would be using recycled water during periods of winter rains. In addition, the Proposed Action would not change plant operations in the summer when the Reclamation Plant is currently running at full capacity. During the summer months, the total volume of recycled water produced would remain the same, with the recycled water reallocated between agricultural and urban users. Therefore, for approximately two-thirds of the year, the Reclamation Plant operations would remain unchanged from current conditions and, therefore, there would be no anticipated changes in either the quantity or quality of flow from the existing plant outfall.

During the spring and fall months (estimated to be March and April in the spring, and September and October in the fall), the volume of recycled water produced at the Reclamation Plant would increase by about 7 - 8% in order to supply urban irrigators in addition to agricultural irrigators. During these months, the discharge at the outfall would be reduced by a similar amount as additional effluent is diverted for reclamation. During this period, minimum flows to the outfall would continue to be met since the Reclamation Plant would not be operating at full capacity. In addition, the Proposed Action would not change the manner in which recycled water is generated and, therefore, there would be no changes in the quality of effluent discharged via the plant's outfall with operational National Pollutant Discharge Elimination System (NPDES) permit conditions continuing to be met.

No structures are proposed within any portion of the 100-year flood hazard area. The Proposed Action would not expose people or structures to any risks from flooding. Negligible impervious surfaces would be created by the Proposed Action, and storm water systems and drainage would not be impacted.

The construction of the RWP pipelines, pump stations, and reservoir would require a permit in compliance with the NPDES General Construction Storm Water Permit Program since construction would disturb an area of more than one acre. As discussed in Section 3.8.3 of this Draft EA, a Storm Water Pollution Prevention Plan would be developed and BMPs implemented in order to minimize the potential water quality impacts from construction.

The Proposed Action would not involve the extraction or treatment of any groundwater, nor would it interfere with groundwater recharge. If the pump stations or any of the pipelines were to leak or fail, it is possible that some tertiary-treated water would infiltrate to the surficial aquifer; however, the amount that could leak would be negligible due to slow percolation through substrate and the type of pipeline material proposed to be used. In addition, the surficial aquifer (A-Aquifer) near the regional wastewater treatment plant is not used for any purpose and is not considered to be hydrologically connected to the underlying aquifers since it is underlain

by the Salinas Valley Aquitard, a regionally-extensive confining layer. Therefore, no impacts to hydrology or water quality are expected to occur from the Proposed Action.

4.8 Indian Trust Assets

4.8.1 No Action

The No Action Alternative would involve no physical changes to the environment and no impacts to ITAs since conditions would remain unchanged.

4.8.2 Proposed Action

There are no tribes possessing legal property interests held in trust by the United States in the land involved with this action and the nearest ITA is Lytton Rancheria, located approximately 89 miles north northwest of the Proposed Action area; therefore, there would be no affect to ITAs.

4.9 Land Use

4.9.1 No Action

The No Action Alternative assumes that the recycled water project component of the RUWAP would not be developed, therefore, this Alternative would not support a number of goals and policies of the City of Marina, City of Del Rey Oaks, City of Monterey General Plans, and the Reuse Plan that support the development of a recycled water source. The land use impacts associated with the No Action Alternative would be greater, in the case of overall consistency with the aforementioned Plans, than those projected for the Proposed Action.

4.9.2 Proposed Action

The Proposed Action would not physically divide an established community. The pipelines north of the City of Marina would be subsurface in a rural, undeveloped area used for grazing. The Proposed Action is consistent with long-range plans in the vicinity that support use of reclaimed water for irrigation purposes for identified sites. The proposed pipelines would not conflict with adjacent land uses since they would be placed underground. The proposed pump stations would be designed to comply with the applicable outside noise level standards for a residential area, minimizing conflicts associated with noise intrusion.

The Proposed Action is also consistent with the following plans: Monterey County General Plan; Fort Ord Reuse Plan; Century Monterey County General Plan; City of Del Rey Oaks General Plan; City of Monterey Draft General Plan; City of Seaside General Plan; and the City of Marina General Plan. Therefore, there would be no land use changes from the Proposed Action.

4.10 Noise

4.10.1 No Action

The No Action Alternative would involve no physical changes to the environment and, therefore, would have no noise impacts.

4.10.2 Proposed Action

Construction Noise

Construction of the Proposed Action is expected to be typical of other facilities in terms of schedule, equipment used, and similar activities. Noise levels would vary during the construction period, depending on the phase. The loudest equipment generally operating at a site during each phase of construction is presented in the RUWAP EIR (Table 4.11-3).

Construction workers could be exposed to noise levels of up to 91 dBA. However, it is anticipated that workers would not be exposed to this noise level over an 8-hour period. Most construction workers would be exposed to noise levels under the regulated levels of 85 dBA over an 8-hour working day. Employees that could possibly be exposed to excessive noise levels would be provided with hearing protection devices and training to reduce their exposure to within regulatory limits.

During construction of the RWP facilities, nearby residences may be temporarily impacted. The estimated maximum noise expected at the closest residence would be approximately 58 dBA. These noise levels would occur where the proposed pipelines pass through residential areas. As described previously, the Cities of Marina and Seaside, as well as Monterey County, limit construction hours and activities to minimize noise impacts. The project would adhere to such restrictions to reduce the construction noise impact to adjacent sensitive uses as set forth in the environmental commitments in Section 6.6 of this EA.

Operational Noise

The primary noise sources for the Proposed Action would be from the pumps housed in two separate pump stations (at the Reclamation Plant and at 3rd Street/5th Avenue). The pump stations would be designed to comply with the applicable outside noise level standard for a residential area, which is a maximum of 65 dBA L_{dn}.

The noise emissions of all major plant components during normal base load operation is typically limited by specifying equipment parameters to the vendors of the allowable sound power levels developed in the noise mode. The method for achieving the level required for each element and its physical details would be developed in parallel with the overall detailed design of the RWP conveyance system. In general, all pre-packaged components would be purchased under the condition that the noise limit stated in the technical specification would be met and guaranteed

by the manufacturers. Operational noise levels from the pumps would not exceed the outdoor noise goal of 65 dBA L_{dn}. Therefore, the Proposed Action would not have operational noise impacts.

MCWD has adopted environmental commitments for reducing noise impacts from the RUWAP EIR, 4.11-R1 to 4.11-R5. Therefore, potential impacts to the environment from the Proposed Action would be mitigated through implementation of the environmental commitments contained in Section 6.7 of this EA.

4.11 Socioeconomic Resources

4.11.1 No Action

The No Action Alternative would have negligible socioeconomic effects because there would be no quantifiable change in demographics, housing, or quality of life with project implementation.

4.11.2 Proposed Action

The Proposed Action is expected to have minimal influence on the economies of the communities within which the RWP facilities are proposed. Economic benefits may occur during the construction phase when demand for local supplies and services are required. The RWP has been assumed and accounted for in MCWD's master planning documents and in the Reuse Authority's Capital Improvement Program, thus securing the physical and financial mechanisms for providing these improvements to serve future planned growth. In addition, MCWD and the Pollution Control Agency have entered into a Memorandum of Understanding (approved in April 2009) that includes financing and payment provision responsibilities of each entity for the Proposed Action and future subsequent recycled water projects, if they occur. The Proposed Action would have growth-inducing effects to the extent that it augments existing water supplies in the area. The growth inducing effects were evaluated in the RUWAP EIR. The Proposed Action may indirectly contribute to population growth if additional water supplies are made available to local jurisdictions. However, growth would not exceed the anticipated population growth set forth in the Fort Ord Reuse Plan, the Association of Monterey Bay Area Government's projections, or the County's and surrounding city's general plans and land use plans. This growth was addressed in the environmental documents prepared for these plans and in the RUWAP EIR.

Although the Proposed Action may have growth-inducing affects, Reclamation does not have jurisdiction over local planning, zoning, or other issues associated with growth.

4.12 Water Supply

4.12.1 No Action

The No Action Alternative would eliminate the additional water supplies required to serve the Ord Community or other areas such as the Monterey Peninsula or the portions of the City of

Marina outside of the Ord Community that would be provided by the RWP. In addition, no new facilities would be constructed. Continued reliance on groundwater would further increase the potential for wells to be impacted by seawater intrusion. If other water supply projects are proposed, designed, and implemented, further environmental review would be necessary to ensure that impacts are adequately mitigated.

4.12.2 Proposed Action

Due to the project nature as a water supply project, necessary infrastructure improvements to existing water systems are included in the description of the Proposed Action (see Section 2) and water supplies would be provided if, and only if, adequate entitlements, infrastructure, and the required treatment (per federal and state standards) were included in the design, construction, and operation of the RWP. The source water for the Proposed Action is the Salinas Valley Reclamation Project located at the Pollution Control Agency's Regional Wastewater Treatment Plant, which is owned and operated by the Pollution Control Agency. The Salinas Valley Reclamation Project provides disinfected, tertiary-level recycled water suitable for all of the urban irrigation purposes identified in the project services area, including parks, playfields, school yards, residential landscaping, and golf courses.

MCWD has an existing agreement in place with Pollution Control Agency that entitles it to receive tertiary treated water from the regional wastewater treatment plant up to the volume of wastewater it conveys to Pollution Control Agency for treatment. The MCWD has an agreement with the MCWRA that further sets the terms and conditions for purchasing Title 22 recycled water from Reclamation Plant (MCWD 1989 and MCWRA, et al. 1996).

The Proposed Action would provide additional water supplies needed to serve the Ord Community, the Monterey Peninsula, and other areas outside of the Ord Community, such as the City of Marina, which would alleviate the need for groundwater pumping and reduce the potential impacts to wells by seawater intrusion.

4.13 Wastewater

4.13.1 No Action

The No Action Alternative would not provide any additional distribution of recycled water from the regional wastewater treatment plant and, therefore, would not reduce effluent discharges to the National Marine Sanctuary. The conditions at the Regional Wastewater Treatment Plant would remain unchanged.

4.13.2 Proposed Action

The Proposed Action would not change the recycled water production processes at the Reclamation Plant; the project would simply modify existing infrastructures to allow for the

diversion of produced recycled water from the plant via the WAPP and into the Proposed Action pipeline. Discharge volume at the outfall would vary seasonally based on the irrigation demands of the Castroville Seawater Intrusion Project and restrictions from agreements between the Pollution Control Agency and MCWD. In addition, the plant would operate to maximize the amount of recycled water production and minimize the ocean discharge while still maintaining an operational quantity of discharge. Refer also to above discussion for 4.7 Hydrology and Water Quality.

There would be no changes in the quality of effluent discharged via the plant's outfall and operational NPDES permit conditions would continue to be met; therefore, there would be no wastewater impacts from the Proposed Action.

4.14 Cumulative Impacts

Cumulative impacts refer to two or more individual effects that, when combined, are considerable or that compound or increase other environmental impacts. The purpose of the cumulative analysis is to identify and summarize the environmental effects of the Proposed Action in conjunction with existing, approved, and anticipated development in the project area. Construction of the Proposed Action is planned to occur within the next three to five years. The geographic area considered for the cumulative analysis includes the cities of Marina, Seaside, Sand City, Del Rey Oaks, and Monterey, in addition to Monterey County near the City of Marina and the Del Monte Golf Course, because these are areas where RWP facilities are proposed and could be affected by or could contribute to construction-related impacts. A list of planned construction projects that may contribute to cumulative effects is presented in Table 4-2. This table is based on input from the planning departments of the relevant jurisdictions. Although it is highly unlikely that the projects in Table 4-2 would be constructed in the same timeframe, it is reasonable to assume that at least one or more of the projects would be constructed at the same time as various components of the RWP.

The cumulative analysis only considers construction-related impacts, since all operational impacts of the Proposed Action are less-than-significant or avoided by adoption of the Mitigation Monitoring Program for the RUWAP EIR that requires implementation of the Environmental Commitments of the Proposed Action (refer to Sections 2.2.3 Environmental Commitments and Section 6 of this EA). While the operation of the cumulative projects listed in Table 4-2 may have cumulative effects, the Proposed Action would not contribute considerably to those effects.

The Proposed Action could contribute to cumulative construction-related effects on air quality, biological resources, cultural resources, noise, and traffic. Additional analysis is provided below to determine the significance of the cumulative effects of the Proposed Action for these areas.

The construction-related effects of the Proposed Action are typically short-term and, therefore, have a relatively narrow window of construction time relative to other planned projects.

Air Quality

Regional Air Quality**.** Potential cumulative air quality effects include short-term construction-related increases in 1) ozone precursor emissions from construction equipment exhaust and 2) PM_{10} emissions from fugitive dust of ground-disturbing activities.

The Monterey Air District CEQA Guidelines require a consistency analysis and determination to assess a project's cumulative effects on regional air quality (i.e., ozone levels that result from increased emissions of NO_x and ROG). Because the RUWAP was considered a population-related project, the Association of Monterey Bay Area Governments was responsible for the consistency analysis. This determination is based on the requirement that the Proposed Action be consistent with the Fort Ord Reuse Plan and other local General Plans in the region. The consistency analysis found that the Regional Augmentation Project, of which the Proposed Action is a component, is consistent with the Air Quality Management Plan. The Proposed Action, therefore, would not contribute to cumulative adverse effects on regional air quality.

Localized Air Quality. The Monterey Air District has identified a threshold of 82 pounds per day (or disturbance of more than 2.2 acres per day) for PM_{10} emissions. The Proposed Action would not have a substantial cumulative contribution to localized concentrations of PM_{10} for the following reasons:

- Fugitive dust from ground-disturbing activities from construction of the Proposed Action with standard dust control measures in-place would be well below the threshold (see Section 3.2), and
- No other cumulative construction project that may be located within approximately ¼ mile of any component of the Proposed Action would be expected to generate substantial particulate matter during the same timeframe such that the combined particulate matter emissions would exceed Monterey Air District thresholds or otherwise create an unacceptable exposure to particulate matter.

Biological Resources

Construction of the Proposed Action resulting in disturbance of unpaved areas for pipelines or other structures could result in the loss or disturbance to special-status plant and wildlife species or their habitat as well as Environmentally Sensitive Habitat Areas. MCWD would conduct preconstruction and post-construction biological surveys for special-status plant and wildlife species and their habitat for projects affecting undeveloped areas. The adoption of the Mitigation Monitoring Program for the RUWAP EIR that requires implementation of the

Environmental Commitments of the Proposed Action, which includes preconstruction surveys, habitat compensation, biological monitoring, and agency coordination, would avoid impacts of the Proposed Action on biological resources (refer to Sections 2.2.3 Environmental Commitments and Section 6 of this EA). Cumulative projects may impact similar biological resources as the Proposed Action; however, these projects would be required to provide mitigation consistent with local and regulatory agency requirements, thereby avoiding cumulative effects.

Cultural Resources

It is possible that the Proposed Action could disturb unknown buried archaeological resources during construction. The adoption of the Mitigation Monitoring Program for the RUWAP EIR, which includes appropriate identification and preservation measures, would avoid impacts of the Proposed Action on cultural resources (refer to Sections 2.2.3 Environmental Commitments and Section 6 of this EA). In addition, the incorporation of appropriate management measures to avoid and/or document resources by other cumulative development in the area, as required by the local jurisdictional regulations, would avoid adverse cumulative effects on cultural resources.

Noise

Cumulative noise impacts include exposure of sensitive land uses to high levels of noise and vibration during construction. Noise generated by the Proposed Action during construction is expected to be about 58 dBA at the nearest residences. Cumulative noise levels may exceed local standards for residential uses (55 to 65 dBA) if components of the RWP are constructed simultaneously with other construction projects an area. Adoption and implementation of the Mitigation Monitoring Program for the RUWAP EIR (refer to Sections 2.2.3 Environmental Commitments and Section 6 of this EA) would require that noise abatement measures are in place during construction. Standard noise abatement would also be required by cumulative development projects during construction activities as per local jurisdictional requirements. By reducing local noise levels with these abatement measures, construction of the Proposed Action would not considerably contribute to cumulative noise impacts.

Traffic

Cumulative traffic-related impacts include temporary traffic increases and level-of-service degradation, conflicts with fixed-route transit service, and access obstruction. Constructing multiple projects in the same timeframe in the same urban area could result in temporary traffic increases from additional construction traffic and delays caused by construction activities. These effects would be most notable if roadway projects in Marina, Seaside, and Monterey occur on the same roadways affected by pipeline installation on a similar schedule. Pipeline construction for the Proposed Action may also contribute to cumulative effects on public transit (bus) routes along the entire length of proposed pipelines within roadway right-of-ways. Construction

activities would temporarily obstruct access to driveways, sidewalks, and bike lanes. The contribution of the Proposed Action to cumulative traffic effects would not be considerable with adoption of the Mitigation Monitoring Program for the RUWAP EIR, which includes traffic control measures for temporary traffic impacts (refer to Sections 2.2.3 Environmental Commitments and Section 6 of this EA).

Table 4-2. Planned Local Construction Projects that May Contribute to Cumulative Effects

Project Location	Planned Project	Project Status	Estimated Construction Timeframe
City of Del Rey Oaks			
Northeast section (former Fort Ord area)	Resort Project. 362 acre resort (approx. 454 rooms, 200,000 sf office space, 76,600 sf commercial/retail and full golf courses) and up to 820 units residential	Site planning, environmental and negotiations currently occurring	2009-2011
City of Marina			
North of Reservation Rd and east of Blanco Rd	UCMBEST (UCSC) 130-acre business park with one site for use as a conference center with up to 150 guest rooms	Environmental review preparation	2009-2015
North of Imjim Pkwy and east of California Ave	Marina Heights. 1,050 residential units (mix of detached and attached units)	Construction started but currently on-hold	2007-2015
North and west of the CSUMB Campus	West and North University Village. Mix of commercial and residential use. 840 residential units and 1.5 millions sf of commercial and nonresidential uses	Under construction	2006-2016
Imjin Pkwy/Rd/Blvd	Full traffic signal system, street improvement projects	Pending design or in design	2007-2012
Throughout City	Street rehabilitation – resurfacing streets throughout city (specific streets not yet known)	On-going	2007-2010
Marina Station	1,360 residential units, 60,000 sf commercial/retail, 143,808 sf office and 651,624 sf industrial	Pending entitlements	2010-2020
City of Monterey			
Del Monte Beach Tract 2 Subdivision	17 residential	Under construction	2009- 2010
Throughout City	Annual street resurfacing program-each year during late summer and early fall, several streets are resurfaced. Specific streets that would be affected in future years not yet known.	On-going	Annually, late summer to early fall
Throughout City	Ongoing sewer rehabilitation project – the City is in the process of replacing inadequate pipelines. Specific streets affected not yet known.	On-going	Ongoing
City of Seaside			
Blackhorse and Bayonet Golf Courses	Seaside Resort. Mixed use project with 330 hotel rooms, 170 timeshare units, 125 single-family lots, reconstruction of golf clubhouse. Development of 84 acres within the existing 375-acre golf course area	Pending project approval	Unknown
Northeast corner of Broadway Ave and	Seaside Library. 32,200 sf building with 124 off-street parking spaces and a small	City's draft Six Year Capital Improvement	Unknown

Project Location	Planned Project	Project Status	Estimated Construction Timeframe
Terrace St	park	Program	
Broadway Ave from Del Monte Blvd to General Jim Moore Blvd	Broadway Ave street improvements, including resurfacing, traffic signal, upgrades, and landscape improvements	Del Monte to Fremont as part of West Broadway Urban Village – remainder unknown	2010-2020
1350 Del Monte Blvd	Hotel Site. Proposal for quality hotel on 6 acres	Awaiting completion of formal application	Unknown
Lightfighter Ave and Hwy 1	The Projects at Main Gate.Up to 559,500 sf retail and hotel/spa/conference facility	Pending final environmental review	Unknown
Pavement Management	Pavement overlays throughout City	Ongoing construction	Ongoing
Corporation Yard at northeast corner of City (former Fort Ord)	New equipment maintenance area grading and paving including building pads for future crew building and equipment maintenance (double wide trailers and carport structures will be used in the interim)	Final design and environmental	2011
Broadway Transit Oriented Development	Redevelopment of the Broadway Ave corridor with a mixed use (residential, office commercial area)	Pending environmental	Unknown
Coe Ave	Class II bike lane	Pending approval	2010
County of Monterey			
Through the Salinas Valley	Salinas Valley Water Project. Final project includes modifications to Nacimiento Dam spillway, changes in the operation of the Nacimiento and San Antonio reservoirs, a surface diversion facility (inflatable rubber dam), use of existing Castroville Seawater Intrusion Project distribution facilities in the short term.	Construction underway	Ongoing
East Garrison portion of former Fort Ord	East Garrison Redevelopment. 1,400 dwelling units, 34,000 square feet of retail, and public uses.	Pending construction	2010-2014
Information Sources, personal communication: City of Marina, Teresa Szymanis City of Monterey, Elizabeth Caraker City of Seaside, Diana Hurlbert County of Monterey. http://www.co.monterey.ca.us/			

4.15 Irreversible and Irretrievable Commitment of Resources

Natural resources include minerals, energy, land, water, forestry, and biota. Nonrenewable resources are those resources that cannot be replenished by natural means, including oil, natural gas, and iron ore. Renewable natural resources are those resources that can be replenished by natural means, including water, lumber, and soil. Although the Proposed Action would use minor amounts of both renewable and nonrenewable natural resources for project construction, this use would not increase the overall rate of use of any natural resource or result in the substantial depletion of any nonrenewable natural resource. Because the Proposed Action is not

proposing the development of or creating access to previously inaccessible areas, the project would not commit future generations to adverse, irreversible changes. Although the Proposed Action has the potential to allow additional growth by providing additional water supplies, this growth is already planned by the local jurisdictions. The potential for growth-inducing effects is further discussed in the RUWAP EIR and Addenda Nos. 1 and 2 to the EIR.

The WAPP would require 3 pumps rated at 250 hp and a smaller jockey pump rated at 50 hp The 3rd Street and 5th Avenue Pump Station would require up to 3 electrical pumps at 200 hp. This would amount to approximately 300,000 kilowatt-hours per year of electricity demand. No other significant energy use is anticipated, except potentially any on-site pumps needed for distribution on individual sites and periodic vehicular trips to monitor and maintain the system. The demand for electricity by the Proposed Action is less than one tenth of one percent of the production capacity of the Duke Energy Power Plant at Moss Landing (2,538 megawatts), the closest power plant that runs on natural gas, and electricity demand would not be expected to present an adverse effect on the load for the electrical grid.

The Proposed Action has some effects due to the indirect emission of greenhouse gases from the production of new electricity demand needed to operate pump stations on the regional grid; however, it is not considered substantial, especially in comparison to more energy intensive water supply alternatives, such as seawater desalination.

Lastly, the Proposed Action is not anticipated to result in irreversible damage from environmental accidents, such as an accidental spill or explosion of a hazardous material. During construction, equipment would be using various types of fuel, and the operation of the proposed system would also use various regulated substances. In the State of California, the storage and use of hazardous substances are strictly regulated and enforced by various local and regional agencies, including the Monterey County Health Department. The enforcement of these existing regulations would preclude credible substantial project impacts related to environmental accidents.

Section 5 Consultation and Coordination

5.1 Agencies and Persons Consulted

* = Technical Advisory Committee (TAC) Member. The TAC met with MCWD staff and a Board representative from May 2002 to early 2003.

California Department of Fish and Game, Deborah Hillard, Ecologist, February 26, 2004.

California Department of Health Services Office of Drinking Water, Betsy Lichti, November 2003.

California Department of Health Services, Division of Drinking Water and Environmental Management, Richard H. Sakiji, Ph.D., PE, May 20, 2004.

California Department of Parks and Recreation, Ken Gray, April 2003.

Carmel Area Wastewater District, Ray Von Dohren. *

Fort Ord Reuse Authority, Jim Arnold, Engineer. *

Fort Ord Reuse Authority, Steve Endsley, Director of Planning and Finance, April 2004.

Fort Ord Reuse Authority, Jim Feeney, Assistant Executive Officer.*

Marina, City of, Fire Department, Harald Kelley, Acting Fire Chief, April 15, 2004.

Marina, City of, Planning, Judy Paterson, March 30, 2004.

Marina, City of, Public Works Department, Charles Johnson, March 30, 2004.

Monterey, City of, Kim Cole, Senior Planner, August 2006.

Monterey, City of, Rich Deal, City Traffic Engineer, March 30, 2004.

Monterey, City of, Planning Department, Bill Fell, Chief of Planning, March 30, 2004.

Monterey, City of, Tom Reeves, City Engineer, March 30, 2004.

Monterey County Water Resources Agency, Chris Moss.*

Monterey County Water Resources Agency, Curtis Weeks, General Manager.*

Monterey Peninsula Water Management District, Andy Bell. *

Monterey Peninsula Water Management District, Henrietta Stern, June 2, 2006.

Monterey Regional Water Pollution Control Agency, Bob Holden, ongoing.

Monterey Regional Water Pollution Control Agency, Keith Israel, General Manager.*

Monterey Regional Water Pollution Control Agency, Robert Jaques, former Director of Engineering Planning and Technology.*

Presidio of Monterey DLIFLC & POM/Ord Military Community, Dewey Baird.*

Sand City, City of, Steve Matarazzo, Community Development Director, March 24, 2004.

Seaside, City of, Department of Public Safety, Mark Morgan, Police Commander, April 5, 2004.

Seaside, City of, Public Works Department, Leslie Llantero, April 15, 2004.

Seaside, City of, Public Works/Engineering Department, Tim O'Halloran, June 2006.

U.S. Army Presidio of Monterey Environmental and Natural Resources, David Eisen, Geologist, April 15, 2004.

5.2 Field Reviews of the Sites

Field reviews of the project sites have occurred numerous times over the past four years by various team members. The following key field reviews necessary for this EA were documented:

- The cultural resources reconnaissance surveys were performed between April 26 through October 6, 2006, and on June 8, 2007.
- The biological surveys were performed on the following dates: March 31, April 1, and June 19-20, 2005; and May 18 and September 27, 2006; April 12, 13, 16 and 24, 2007, and April 15, 2009.
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5.3 Public Involvement

Development of the RWP has been occurring for the past ten years and has included an ongoing public involvement process. During the recent RUWAP and RWP process, MCWD conducted the following publicly noticed (in newspapers of general circulation) hearings and meetings:

- Reuse Authority Projects and Planning Committee Meeting – 1/8/03
- MCWD Board/Public Workshop – 1/23/03
- MCWD Board Meeting – 3/19/03
- Reuse Authority Administrative Committee Meeting – 4/2/03
- Reuse Authority Board Meeting – 4/11/03
- MCWD Board Meeting – 8/13/03
- MCWD Public EIR Scoping Meeting – 9/8/03
- MCWD Board Meeting – 3/24/04
- MCWD Board Meeting – 5/26/04
- MCWD Public Workshop – 7/13/04
- Reuse Authority Administrative Committee – 8/4/04
- MCWD Board Meeting – 10/13/04
- MCWD Board Meeting (EIR certification) – 10/27/04
- MCWD Board Meeting (Plan approval) – 4/13/05
- Reuse Authority and MCWD Joint Board Meeting – 6/10/05
- MCWD Board Meetings – 1/25/06 and 2/8/06
- Reuse Authority Board Meeting – 9/8/06
- MCWD Board Meeting (adoption of Addendum No. 1 to the RUWAP EIR) – 10/25/06
- MCWD Board Meeting (approval of the RWP and adoption of the MMRP) – 11/15/06
- MCWD Board Meeting (approval of changes to the RWP and adoption of Addendum No. 2 and Revised MMRP) – 2/14/2007)

The meeting minutes and complete records of the decisions made at the above meetings, as applicable, are available for review at the MCWD office (11 Reservation Road, Marina, CA 93933) and/or the Reuse Authority office (100 12th Street, Bldg. 2880, Marina, CA 93933).

5.4 Fish and Wildlife Coordination Act (16 USC 651 et seq.)

The Fish and Wildlife Coordination Act requires that Reclamation consult with fish and wildlife agencies (federal and state) on all federal water development projects that could affect biological resources. The Proposed Action is not a federal water development project and therefore the Fish and Wildlife Coordination Act does not apply.

5.5 Endangered Species Act (16 USC 1531 et seq.)

Section 7 of the ESA requires federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of these species. The Consultation Process to date includes the following:

- February 28, 2007 – Reclamation requested a species list for the project area.
- March 23, 2007 – Species list for project area was received from the USFWS.
- April 16, 2007 – Reclamation informed the USFWS of the presence of listed species in the project area. A BO template proposed for guiding development of a BA was submitted to the USFWS for their input on its adequacy.
- April 16, 2007 – USFWS indicated that the template did a good job of outlining the typical information that must be included in their documents.

Section 7 consultation will be initiated by Reclamation shortly after release of this Draft EA for public review. Reclamation will not finalize this EA until consultation with the USFWS is complete. When Reclamation receives a BO from the USFWS, then federal ESA compliance requirements will have been met. The BO will be included in the appendix of the final EA.

Potential impacts to federally listed species have been identified and would be mitigated through implementation of the environmental commitments presented in Section 6 of this EA.

5.6 National Historic Preservation Act (16 USC 470 et seq.)

Section 106 of the NHPA requires federal agencies to evaluate the effects of federal undertakings on historical, archaeological, and cultural resources. Construction activities associated with this project were determined to be the type of activities that have the potential to affect historic properties. Based on the findings of a field reconnaissance survey, carried out in support of this project, Reclamation consulted with the California State Historic Preservation Officer (SHPO) requesting concurrence on a finding of no historic properties affected (Archaeological Consulting 2007a and 2007b). SHPO concurred with this finding on March 23, 2008.

For the Native American Consultation process, a Sacred Lands File Search was conducted through the Native American Heritage Commission. The Native American Heritage Commission provided a list of locally affiliated Native Americans with whom further consultation was initiated. Because of the substantial revisions of the APE through the course of this project, the Sacred Lands Search was requested twice and letters were sent to the listed Native Americans on two occasions as well. The correspondence was provided in the *Phase 1 Archaeological Reconnaissance For The Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, Marina Ord Community, Seaside And Monterey, Monterey County, California* by Archaeological Consulting (Mary Doane, B.A., and Gary S. Breschini, Ph.D., RPA) revision dated May 22, 2007, and the *Phase 1 Archaeological Reconnaissance for Two Additional Alignments* dated September 4, 2007. Some information in these documents is considered confidential and, therefore, these reports are available on an as-needed basis from MCWD.

The search of the Sacred Lands Files of the Native American Heritage Commission found no Native American resources recorded within the project APE. Consultations with Native Americans also produced no new archaeological or cultural site information. No specific concerns were raised for the proposed northern alignment of the project APE through Marina and Seaside. Several Native Americans initially expressed concern about the original Monterey Extension alignment because of the number of prehistoric sites in the Monterey area. The proximity of the proposed alignment to identified sites and to resources which would have been utilized prehistorically, such as the creeks and marshland, raised issues for these Native Americans. The early realignment of the Monterey extension to avoid impacts to these resources served to address some of their concerns. Nevertheless, several Native Americans suggested that the project should require archaeological and/or Native American monitoring of excavations in the parts of the APE which remain in proximity to the prehistoric sites in Monterey. Several Native Americans wished to be informed of any new discoveries during the project, especially if Native American burials are encountered.

5.7 Indian Trust Assets

ITAs are legal interests in property held in trust by the United States for federally-recognized Indian tribes or individual Indians. An Indian trust has three components: (1) the trustee, (2) the beneficiary, and (3) the trust asset. ITAs can include land, minerals, federally-reserved hunting and fishing rights, federally-reserved water rights, and in-stream flows associated with trust land. Beneficiaries of the Indian trust relationship are federally-recognized Indian tribes with trust land; the United States is the trustee. By definition, ITAs cannot be sold, leased, or otherwise encumbered without approval of the United States. The characterization and application of the United States trust relationship have been defined by case law that interprets Congressional acts, executive orders, and historic treaty provisions.

There are no tribes possessing legal property interests held in trust by the United States in the land involved with this action and the nearest ITA is Lytton Rancheria, located approximately 89 miles north northwest of the Proposed Action area; therefore, there would be no affect to ITAs.

5.8 Migratory Bird Treaty Act (16 USC Sec. 703 et seq.)

The MBTA implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the MBTA provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; or possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Subject to limitations in the MBTA, the Secretary of the Interior may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting, or exporting of any migratory bird, part, nest or egg would be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits, and migratory flight patterns. Potential impacts to raptors and other special-status avian species protected under the MBTA have been identified and would be mitigated through implementation of the environmental commitments presented in Section 6 of this EA.

5.9 Executive Order 11988 – Floodplain Management and Executive Order 11990 - Protection of Wetlands

Executive Order 11988 requires federal agencies to prepare floodplain assessments for actions located within or affecting flood plains, and similarly, Executive Order 11990 places similar requirements for actions in wetlands. The Proposed Action does not propose any features within or near floodplains, flood hazard zones, Waters of the U.S., or wetlands; therefore, the Proposed Action would not affect either concern.

5.10 Clean Air Act (42 USC 7506 (C))

Section 176 of the Clean Air Act (CAA) requires that any entity of the Federal government that engages in, supports, or in any way provided financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable State Implementation Plan (SIP) required under Section 110 (a) of the CAA (42 U.S.C. 7401 (a)) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of those standards. Each federal agency must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements will, in fact conform to the applicable SIP before the action is taken. Potential impacts to air quality have been identified and would be mitigated through implementation of the environmental commitments presented in Section 6 of this EA.

Section 6 List of Environmental Commitments

6.1 Introduction

The following topical environmental commitments have been adopted by MCWD as required implementation measures (MMRP, February 2007) during previous CEQA reviews of the Proposed Action. The following topical sections correspond to the EIR and Addenda topics and the numbering retains the CEQA numbering scheme for consistency.

6.2 Air Quality

4.3-R1 The contractors shall adhere to the following as required to reduce particulate matter emissions below the MBUAPCD threshold: water all active construction areas at least twice daily , cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard, pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites, sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites, sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets, hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more), enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)limit traffic speeds on unpaved roads to 15 mph, install appropriate best management practices or other erosion control measures to prevent silt runoff to public roadways, replant vegetation in disturbed areas as quickly as possible, install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site, limit the area subject to excavation, grading and other construction activity at any one time, post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints (the person shall respond to complaints and take corrective action within 48 hours), and ensure that the phone number of MBUAPCD is visible to ensure compliance with Rule 402 (Nuisance).

4.3-R2 Subject to approval by the MBUAPCD prior to and, as needed, during project construction, MCWD and the contractor shall implement measures to reduce or eliminate diesel exhaust emissions to meet identified thresholds of significance, such as reduction in hours of operation of equipment contributing to such emissions or by utilizing oxidation catalysts or catalytic particulate matter filters on all diesel powered equipment above 50 horsepower that require CARB-certified low-sulfur diesel fuel (less than or equal to 15 parts per million by weight (ppmw)). Site-specific risk assessment may be required to determine the appropriate measures to implement.

6.3 Biological Resources

4.4-R1 Conduct Pre-Construction Surveys. A qualified biologist shall conduct a pre-construction survey for special-status plant species to determine presence of these species. The biologist shall prepare a report that provides the results of the survey, including a description of the baseline habitat conditions, and, if found, the number of individuals and location of the populations identified within the area of impact. If no individual are found, no further mitigation is necessary. If individuals are found, the following measures shall be implemented: Based on the results of the report, the design of the alternative shall avoid individuals to the maximum extent possible. If avoidance is not feasible, a Rare Plant Restoration Plan shall be prepared by a qualified biologist and implemented. The plan shall include, but is not limited to, the following: a description of the baseline conditions of the habitats within the area of impact, including the presence of any special-status species, their locations, and densities; procedures to control non-native species invasion and elimination of existing non-native species within the area of impact; provisions for ongoing training of facility maintenance personnel to ensure compliance with the requirements of the plan; a detailed description of on-site and off-site restoration areas, salvage of seed and/or soil bank, plant salvage, seeding and planting specifications; and a monitoring program that describes annual monitoring efforts which incorporate success criteria and contingency plans if success criteria are not met.

4.4-R2 Conduct Pre-Construction Surveys for Burrowing Owls and Implement CDFG Guidelines. Pre-construction surveys shall be conducted to locate active nesting burrows. Surveys will consist of visually checking the area within 500 feet of the proposed storage reservoir site within 30 days of initiating construction. If active nests are found, no-disturbance buffers shall be established around all active nesting burrows during the breeding season, and the CDFG burrowing owl guidelines shall be implemented during the non-breeding season. If no burrowing owls are found, no further mitigation measures are required.

Breeding season: If active nests are found, biologist shall establish a 250-foot buffer zone around each burrow. No construction activities shall be permitted within the zone until after the breeding season, which extends from February 1 to August 21, or until it is determined that the young have fledged.

Winter Season: Adult burrowing owls can occupy burrows year-round. Therefore, before construction activities begin in the vicinity of active burrows (and following the breeding season), CDFG mitigation guidelines for burrowing owls (1995) shall be implemented. The guidelines require that one-way doors be installed at least 48 hours before construction at all active burrows that exist within the construction area so that the burrows are not occupied during construction. The guidelines also require installation of two artificial burrows for each occupied burrow that is removed. Qualified wildlife biologists shall conduct pre-construction surveys for burrowing owls within 30 days of initiation of construction activities. The one-way doors shall be installed at that time to ensure

that the owls can get out of the burrows and not back in. Artificial burrows shall be constructed within the area prior to installation of the one-way doors.

4.4-R3 A Memorandum of Understanding with CDFG shall be obtained to allow a qualified biologist to remove and relocate coast horned lizards from the construction area if encountered during construction activities. The Memorandum of Understanding shall include, but is not limited to, the methods of capture and handling, an estimation of the number expected to be captured and handled, the duration of capture and handling, and a description of the established relocation area. If the relocation is proposed to occur outside of the project site, MCWD must coordinate and obtain approval from the landowner. Details of this procedure shall be reviewed by CDFG and implemented by a qualified biologist.

4.4-R4 Conduct Construction Monitoring Program for Coast Horned Lizards, which includes procedures for capture and release. A qualified biologist shall remain on-site during initial grading activities to salvage and move coast horned lizards that may be uncovered during earthmoving activities. Recovered individuals shall be placed in appropriate habitat outside of the project construction site in accordance with the Memorandum of Understanding with CDFG. The monitor shall walk alongside the grading equipment in each new area of disturbance, and shall have the authority to halt construction temporarily if necessary to capture and relocate an individual. Any individual captured in the grading zone shall be relocated as soon as possible to adjacent suitable habitat outside of the area of impact.

4.4-R5 Conduct Pre-Construction Surveys for Raptors and their Nests. If trees suitable for raptor nesting exist in or within 300 feet of the construction area, they shall be surveyed by a qualified biologist for active nest prior to construction (within 30 days of construction initiation). If active nests are found, a suitable construction buffer shall be established by a qualified biologist until the young of the year have fledged. Alternatively, construction activities that may affect nesting raptors can be timed to avoid the nesting season (generally April 15 to August 1).

4.4-R6 Conduct Pre-Construction Surveys for Coast Horned Larks and Loggerhead Shrike. A qualified biologist shall perform pre-construction surveys for active nests of these two species prior to construction (within 30 days of construction initiation). If active nests are found, a suitable construction buffer shall be established by a qualified biologist until the young of the year have fledged. Alternatively, construction activities that may affect nesting raptors can be timed to avoid the nesting season (generally April 15 to August 1).

4.4-R7 A Revegetation Plan shall be prepared by a qualified biologist to revegetate and restore impacted habitat. This plan shall include a list of appropriate species, planting specifications, monitoring procedures, success criteria, and contingency plan if success criteria are not met.

4.4-R8 Conduct an Employee Education Program for Construction Crew and MCWD staff prior to construction activities. A qualified biologist (if necessary, the

biological monitor) shall meet with the construction crew at the onset of construction to educate the construction crew on the following: 1) the appropriate access route in and out of the construction area; 2) how biological monitor will examine the area and agree upon a method which will ensure the safety of the monitor during such activities; 3) the special-status species that may be present; 4) the specific mitigation measures that will be incorporated into the construction effort; and 5) the proper procedures if a special-status animal or any other animal is encountered within the project site.

4.4-R9 Trees and vegetation not planned for removal shall be protected during construction to the maximum extent possible. This includes the use of exclusionary fencing of herbaceous and shrubby vegetation, such as hay bales, and protective wood barriers for trees. Only certified weed-free straw shall be used to avoid the introduction of non-native, invasive species.

4.4-R10 Following construction, disturbed areas shall be restored to pre-project contours to the maximum extent possible and revegetated using locally-occurring native species and native erosion control seed mix, per the requirements of the Revegetation Plan.

4.4-R11 Protective fencing shall be placed so as to keep construction vehicles and personnel from impacting vegetation adjacent to the project site outside of work limits.

4.4-R12 Grading, excavating, and other activities that involve substantial soil disturbance shall be planned and carried out in consultation with a qualified hydrologist, engineer, or erosion control specialist, and shall utilize standard erosion control techniques to minimize erosion and sedimentation to native vegetation.

4.4-R13 A representative shall be appointed by MCWD who will be the contact source for any employee or contractor who may inadvertently kill or injure a special-status species or find one dead, injured, or trapped. The representative shall be notified immediately to notify USFWS and CDFG. The representative shall be identified during the Employee Education Program and his/her contact information shall be provided to USFWS and CDFG.

4.4-R14 If maintenance activities require ground disturbance, the impacts shall be subject to the requirements of the Revegetation Plan described in Mitigation Measure 4.4-R7.

4.4-R15 Conduct an Employee Education Program for Maintenance Crew and other MCWD staff prior to implementation. A biological monitor shall meet with the maintenance crew at the onset of project operations to educate the crew on the following: 1) the appropriate access route in and out of the facility area; 2) how biological monitor will examine the area and agree upon a method which will ensure the safety of the monitor during such activities; 3) the special-status species that may be present; 4) the specific mitigation measures that will apply to

maintenance activities; and 5) the proper procedures if a special-status animal or any other animal is encountered within the project site.

4.4-R16 Not applicable to the RWP

4.4-R17 Not applicable to the RWP

4.4-R18 A Memorandum of Understanding with CDFG shall be obtained for a qualified biologist to remove and relocate black legless lizards from the construction area if encountered during construction activities. The Memorandum of Understanding shall include, but is not limited to, the methods of capture and an estimation of the number of individuals expected to be captured and handled, the duration of capture and handling, and a description of the established relocation area. If the relocation is proposed to occur outside of the project site, MCWD must coordinate and obtain approval from the landowner. Details of this procedure shall be reviewed by CDFG and implemented by a qualified biologist.

4.4-R19 Conduct Construction Monitoring Program for Black Legless Lizards, which includes procedures for capture and release. A qualified biologist shall remain on-site during initial grading activities to salvage and move lizards that may be uncovered during earthmoving activities. Recovered individuals shall be placed in appropriate habitat outside of the within the project site in accordance with the Memorandum of Understanding with CDFG. The monitor shall walk alongside the grading equipment in each new area of disturbance, and shall have the authority to halt construction temporarily if necessary to capture and relocate an individual. Any individual captured in the grading zone shall be relocated as soon as possible to adjacent suitable habitat outside of the area of impact.

4.4-R20 Not applicable to the RWP

4.4-R21 Not applicable to the RWP

4.4-R22 All food-related and other trash shall be disposed of in closed containers and removed from the project area at least once a week during the construction period, or more often if trash is attracting avian or mammalian predators. Construction personnel shall not feed or otherwise attract wildlife to the area.

4.4-R23 Not applicable to the RWP

CUM-R2 Conduct pre-construction and post-construction biological surveys for special-status plant and wildlife species and their habitat for projects affecting undeveloped habitat, compensate for losses, and conduct construction monitoring. MCWD will retain a qualified biologist to conduct pre-construction and post-construction surveys for burrowing owl, loggerhead shrike, California horned lark, California horned lizard, black legless lizards, and raptors to determine whether species are present. MCWD will implement the recommendations of the biologist. Recommendations could include relocating the species, altering the construction schedule to avoid breeding season, educating construction workers,

and monitoring construction activities (see Mitigation Measures 4.4-R1, through 4.4-R23).

6.4 Cultural Resources

4.6-RA If archaeological resources or human remains are accidentally discovered during construction, work shall be halted within 50 meters (150 feet) of the find until it can be evaluated by a qualified professional archaeologist. If the find is determined to be adverse, appropriate mitigation measures shall be formulated and implemented with the concurrence of the lead agency. If the find includes human remains, the County Coroner must be notified and, if they are determined to be Native American remains, the Native American Heritage Commission shall be notified. The Native American Heritage Commission will appoint a Most Likely Descendant who will provide recommendations for the disposition of the remains.

4.6-RB The portions of the Monterey Extension mains and laterals which pass within 50 meters of a recorded archaeological site will be monitored by a qualified archaeological monitor, with local expertise and under the supervision of the principal archaeologist for the project. This precautionary monitoring would take place near the intersections of Camino Aguajito, Via Lavandera and Costanoan Drive (CA-MNT-372, CA-MNT-373), and in the lateral alignment through Sloat Avenue and 3rd Street (CA-MNT-955). The project principal archaeologist must be a Registered Professional Archaeologist (RPA) and/or meet the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (36 CFR Part 61). These regulations define the minimum education and experience required to perform identification, evaluation, registration, and treatment activities. In some cases, additional areas or levels of expertise may be needed, depending on the complexity of the task and the nature of the historic properties involved.

6.5 Geology and Soils

4.7-R1 To minimize the potential effects from strong seismic ground shaking on project components, a project specific geotechnical analysis shall be performed by a registered professional engineer with geotechnical expertise prior to the development of project level plans. The recommendations of the geotechnical analysis shall be incorporated into project plans and implemented during construction, as appropriate.

4.7-R2 The engineer shall develop project level plans based upon and in response to the observations and recommendations made in the project specific geotechnical analysis.

4.7-R3 MCWD, the contractor and engineer (as appropriate) shall develop emergency response procedures in order to control and stop the release of recycled water in the event that seismic ground shaking causes a leak or rupture in the earthen or tank reservoirs or pipelines.

6.6 Hazards and Hazardous Materials

4.8-R1 The MCWD shall require review of construction plans for the pipeline by the Fort Ord, U.S. Army, Base Realignment and Closure office to confirm that construction is planned in areas cleared of Military Munitions and which project components may be located near Military Munitions before construction is initiated. An Army-approved Military Munitions monitor shall be present during grading in areas where excavation exceeds two feet and any Military Munitions encountered shall be properly managed. Access shall be restricted to adjacent areas by means of temporary fencing and signage.

4.8-R2 For areas recommended or required by U.S. Army, Base Realignment and Closure Office Fort Ord (see EPA Superfund Record of Decision; EPA ID CA7210020676, dated 4/6/05, the MCWD shall require that all pipeline construction workers receive an Army Military Munitions safety briefing from the U.S. Army, Base Realignment and Closure Fort Ord office prior to starting construction and, as needed thereafter. In the event Military Munitions is suspected or discovered, the following actions shall be taken: MCWD and their contractors shall immediately suspend actions which may affect the item the item shall not be touched or disturbed, the location shall be clearly marked, and the local law enforcement agency (Presidio of Monterey (POM) Police) contacted immediately for further investigation. Upon notification, the police shall secure the area and make arrangements to have the item identified and destroyed.

6.7 Noise

4.11-R1 The construction contractor shall limit exterior construction activities to the hours of restriction consistent with the noise ordinance of, and encroachment permits issued by, the relevant land use jurisdictions. If alternative traffic control measures are unavailable and if approved by staff of the relevant City identified below through their encroachment permit, nighttime construction may be conducted for the following segments of road provided that sensitive receptors (in this case, residences, nursing homes, and hotels/motels) are located an adequate distance from construction activities (as determined by the relevant land use jurisdiction):

Reservation Road between Seacrest Avenue and Crescent Avenue [Marina – preferred alignment]
Fremont Street between Kimball Avenue and Airport Boulevard [Seaside – preferred alignment]
Del Monte Avenue between Park Avenue and Camino Aguajito [Monterey – alternative alignment]
Del Monte Avenue between Camino Aguajito and Figueroa Street [Monterey – preferred alignment]

4.11-R2 The contractor shall locate all stationary noise-generating equipment as far as possible from nearby noise-sensitive receptors. Where possible, noise-generating equipment shall be shielded from nearby noise-sensitive receptors by noise-

attenuating buffers. Stationary noise sources located 500 feet from noise-sensitive receptors shall be equipped with noise reducing engine housings. Portable acoustic barriers shall be placed around noise-generating equipment that is located less than 200 feet from noise-sensitive receptors.

4.11-R3 The contractor shall assure that construction equipment powered by gasoline or diesel engines have sound control devices at least as effective as those provided by the original equipment manufacturer. No equipment shall be permitted to have an unmuffled exhaust.

4.11-R4 The contractor shall assure that noise-generating mobile equipment and machinery are shut-off when not in use.

4.11-R5 Residences within 500 feet of a construction area shall be notified of the construction schedule in writing, prior to construction. The Project Applicant and contractor shall designate a noise disturbance coordinator who would be responsible for responding to complaints regarding construction noise. The coordinator shall determine the cause of the complaint and ensure that reasonable measures are implemented to correct the problem. A contact number for the noise disturbance coordinator shall be conspicuously placed on construction site fences and written into the construction notification schedule sent to nearby residences.

6.8 Public Services and Recreation

4.13-R1 During construction, the contractor shall insure that adequate access to open space, park, and public areas is made available to the public at all times. If construction activities require temporary closing of an existing entrance or exit, the contractor shall provide an alternate entrance/exit for the duration of construction within the vicinity. The appropriate City or County shall approve the alternate entrance/exit prior to installation. The contractor shall also provide adequate noticing and/or signage, as directed by the City or County, for public notification and safety.

6.9 Traffic

4.14-R1 The construction contractor shall prepare traffic control/management management plans for construction of the pipeline within each of the affected jurisdictions including the Cities of Monterey, Seaside and Marina, Monterey County, and Caltrans as appropriate. These traffic control plans shall be reviewed and approved by the affected public agency prior to the commencement of work and an encroachment permit obtained based upon the traffic control plan(s) or other information prepared by a qualified traffic engineer. The traffic control/management plan shall specify the times during which construction activities would occur and times when travel lanes cannot be blocked (e.g., peak traffic periods as directed by the affected City Engineer). The plans shall provide details regarding the placement of traffic control and warning devices, detours, and that the trench must be covered and/or plated during times of non-construction.

4.14-R2 The traffic control/management plan must include a program that provides continual coordination program with the affected Agencies to allow for adjustments and refinements to the plan once construction is underway.

4.14-R3 As a supplement to the traffic control/management plan, the construction contractor shall coordinate with the affected agencies to determine the need for a public information program that would inform area residents, employers, and business owners of the details concerning construction schedules and expected travel delays. The public information program could utilize various media venues (e.g. newspaper, radio, television, telephone hot lines, Internet, etc.) to disseminate information such as:

- Overview of construction project.
- Updates on location of construction zone.
- Identification on street(s) locations anticipated to be affected by construction;
- Times when construction activities would occur and when traffic delays can be expected.
- Identification of alternate travel routes that could be use to avoid construction delays.

4.14-R4 During the preparation and implementation of traffic control/management plans, special consideration shall be given to the locations where direct driveway access is being impacted. Measures shall be developed and coordinated with the individual property owners who are affected by project construction to minimize access disruption to their private residences and/or businesses.

4.14-R5 A component of the traffic control/management plan public information program shall include provisions for informing area residents, major employers, and commercial businesses that access restrictions/disruptions would occur. Additional information shall be prepared to advise the affected public of alternative access routes if local affected agencies determine that such a plan is necessary.

4.14-R6 The construction contractor shall coordinate with Monterey-Salinas Transit to identify routes affected by the pipeline construction. It is suggested that Monterey-Salinas Transit post notices at bus stops and on buses along affected routes to notify passengers of potential delays or service adjustments on these routes. Sufficient notification as to the exact dates when delays can be expected or service adjustments would be necessary would be given to Monterey-Salinas Transit to allow for timely posting of these notices.

4.14-R7 Traffic control/management plans which need to be prepared for the affected jurisdictions or agencies shall identify all bus stops in the immediate vicinity of construction zones and shall make provisions for these bus stops to remain accessible throughout the duration of the localized construction impact. In cases where the blockage of existing bus stops cannot be avoided the construction contractor shall coordinate with Monterey-Salinas Transit to provide temporary bus stop locations.

CUM-R3 MCWD shall coordinate with Relevant Local Agencies to Develop and Implement a Phased Construction Plan to Reduce Cumulative Traffic, and Noise Impacts. The MCWD will contact local agencies that have projects planned in the same area (i.e., project sites within 1 mile or projects that affect the same roadways) and that have construction schedules that overlap with construction of the Recycled Water Project. MCWD (or their contractor) will coordinate with local agencies responsible for said projects to develop a phased construction plan that includes the following components:

Evaluate roadways affected by construction activities and minimize roadway and traffic disturbance (e.g., lane closures and detours) and the number of construction vehicles using the roadways. This may involve scheduling some construction activities simultaneously or phasing.

Prepare compatible traffic control plans for construction projects. If one traffic control plan cannot be prepared, the construction contractor for the Recycled Water Project and the relevant local agencies (or their construction contractors) will ensure that the traffic control plans for projects affecting the same roadways are compatible. The traffic control plan can be modeled after that required for the Recycled Water Project (refer to Mitigation 4.14-R1 through 4.14-R3). Implement noise reductions measures for each project with overlapping construction timeframes. These measures include: limiting hours of construction activities, employing noise-control construction practices, and implementing a noise control plan (4.11-R1 through 4.11-R5).

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Appendix A
Table 1. Special-Status Species - Recycled Water Project

Species	Status (USFWS/ CDFG/ CNPS)	General Habitat	Potential Occurrence within Project Vicinity
MAMMALS			
Lasiurus cinereus hoary bat	-- / CNDDB / --	Prefers open habitats or habitat mosaics with access to trees for cover and open areas or edge for feeding. Generally roost in dense foliage of trees.	**Unlikely:** No documented occurrences within the project vicinity and the project site lacks appropriate roosting and foraging habitat.
Reithrodontomys megalotis distichlis Salinas harvest mouse	-- / CNDDB / --	This subspecies of the western harvest mouse is known only to occur in the Monterey Bay region in fresh and brackish water wetlands and probably in the adjacent uplands around the mouth of the Salinas River.	**Unlikely:** No appropriate habitat present within project boundaries.
*Sorex ornatus salarius** Monterey ornate shrew	-- / SSC / --	Mostly moist or riparian woodland habitats, and within chaparral, grassland, and emergent wetland habitats where there is a thick duff or downed logs.	**Unlikely:** No appropriate habitat present within project boundaries. Figure B-18 from the HMP does not identify any appropriate habitat within the project boundaries.
Taxidea taxus American badger	-- / SSC / --	Dry, open grasslands, fields, and pastures	**Low:** Marginal habitat along portion of the alignment on Armstrong Ranch; species not documented to occur in the vicinity.
BIRDS			
Agelaius tricolor tricolored blackbird	-- / SSC / --	Nest in colonies in dense riparian vegetation, along rivers, lagoons, lakes, and ponds. Forages over grassland or aquatic habitats.	**Unlikely:** No appropriate habitat present within project boundaries.
Asio flammeus short-eared owl	-- / SSC / --	Open country, often abroad by day. Associated with fresh and salt water marshes, dunes, and tundra.	**Moderate:** Marginal habitat within the project site; no documented occurrences in the project vicinity.
Athene cunicularia burrowing owl	-- / SSC / --	Burrows are protected. Require open grassland habitats with low-growing vegetation and abandoned burrows. Prefers these areas associated with some raised perches.	**High:** Species has been observed within the Armstrong Ranch.

Species	Status (USFWS/ CDFG/ CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Buteo regalis ferruginous hawk	-- / CNDDB / --	Prefer grassland and arid areas with an abundance of prey species. Do not breed in California, only overwinter (August-March).	**High:** Armstrong Ranch provides foraging habitat, and species has been observed in the vicinity. However, nesting does not occur in California so no nesting habitat is present.
Charadrius alexandrinus nivosus western snowy plover	FT / SSC / --	Sandy beaches on marine and estuarine shores, also salt pond levees and the shores of large alkali lakes. Requires sandy, gravelly or friable soil substrate for nesting.	**Unlikely:** No appropriate habitat present within project boundaries.
Circus cyaneus northern harrier	-- / SSC / --	Grasslands, meadows, marshes, and seasonal and agricultural wetlands	**High:** Armstrong Ranch provides foraging and nesting habitat, and species has been observed in the vicinity.
Cypseloides niger black swift	-- / SSC / --	Regularly nests in moist crevices or caves on sea cliffs above the surf, or on cliffs behind or adjacent to waterfalls in deep canyons. Forages widely over many habitats.	**Unlikely:** No appropriate habitat present within project boundaries.
Elanus leucurus white-tailed kite	-- / CFP / --	Open groves, river valleys, marshes, and grasslands. Prefer such area with low roosts (fences etc.). Nest in shrubs and trees adjacent to grasslands.	**Moderate:** No nesting habitat present within project boundaries but possible foraging habitat exists within the grasslands on Armstrong Ranch
Eremophila alpestris actia California horned lark	-- / SSC / --	Variety of open habitats, usually where large trees and/or shrubs are absent. Found from grasslands along the coast to deserts at sea-level and alpine dwarf-shrub habitats are higher elevations. Builds open cup-like nests on the ground.	**High:** Armstrong Ranch provides foraging and nesting habitat, and species has been observed in the vicinity.
Falco mexicanus prairie falcon	-- / CNDDB / --	Associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas. Uses open terrain for foraging; nests in open terrain with canyons, cliffs, escarpments, and rock outcrops.	**Moderate:** Foraging habitat exists within the Armstrong Ranch, but project site lacks suitable nesting habitat.
Lanius ludovicianus loggerhead shrike	-- / SSC / --	Residents of lowlands and foothills. Prefers open habitats with scattered shrubs, trees, fences, or other lookout posts	**Moderate:** Possible nesting sites within the Armstrong Ranch and species has been observed in the vicinity.

Species	Status (USFWS/ CDFG/ CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Pelecanus occidentalis californicus California brown pelican	FE / SE / --	Found in estuarine, marine subtidal, and marine pelagic waters along the California coast. Usually rests on water or inaccessible rocks, but also uses mudflats, sandy beaches, wharfs, and jetties.	**Unlikely:** No appropriate habitat present within project boundaries.
Rallus longirostris obsoletus California clapper rail	FE / SE-CFP / --	Occur within a range of salt and brackish marshes	**Unlikely:** No appropriate habitat present within project boundaries.
Riparia riparia bank swallow	-- / ST / --	Nest colonially in sand banks. Found near water; fields, marshes, streams, and lakes.	**Unlikely:** No appropriate habitat present within project boundaries.
REPTILES AND AMPHIBIANS			
Actinemys marmorata western pond turtle	-- / SSC / --	Associated with permanent or nearly permanent water in a wide variety of habitats including streams, lakes, ponds, irrigation ditches, etc. Require basking sites such as partially submerged logs, rocks, mats of vegetation, or open banks.	**Unlikely:** No appropriate habitat present within project boundaries.
Actinemys marmorata pallida southwestern pond turtle	-- / SSC / --	Inhabits permanent or nearly permanent bodies of water in many habitat types. Requires basking sites such as partially submerged logs, vegetation mats, or open mud banks.	**Unlikely:** No appropriate habitat present within project boundaries.
Ambystoma californiense California tiger salamander	FT / SSC-SC / --	Annual grassland and grassy understory of valley-foothill hardwood habitats in central and northern California. Need underground refuges and vernal pools or other seasonal water sources.	**Moderate:** No breeding habitat is present within the project site; however, a portion of the alignment south of Coe Avenue lies within two kilometers of potential breeding habitat. The USFWS assumes presence in suitable upland habitat within two kilometers of a potential or known breeding site. There was a potential breeding site located within Armstrong Ranch, but it was determined through genetic testing that the tiger salamander population was non-native.

Species	Status (USFWS/ CDFG/ CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Ambystoma macrodactylum croceum Santa Cruz long-toed salamander	FE / SE-SFP / --	Preferred habitats include ponderosa pine, montane hardwood-conifer, mixed conifer, montane riparian, red fir and wet meadows. This is an isolated subspecies which occurs in a small number of localities in Santa Cruz and Monterey Counties.	**Unlikely:** No appropriate habitat present within project boundaries; species not known to occur within the vicinity.
Anniella pulchra nigra black legless lizard	-- / SSC / --	Requires moist, warm habitats with loose soil for burrowing and prostrate plant cover, often forages in leaf litter at plant bases; may be found on beaches, sandy washes, and in woodland, chaparral, and riparian areas. Black-legless lizards and silvery legless lizards (*Anniella pulchra pulchra*) are both found within Monterey County, and, while color patterns mark phenotypic differences in these two subspecies (with black legless lizard being much darker dorsally and bright yellow ventrally), genetic testing to determine differentiation at the subspecies level is inconclusive at this time along the central coast of California. Therefore, for the purposes of this analysis, it is assumed that the silvery legless lizard and black legless lizard are the same subspecies.	**High:** Appropriate habitat is present within project boundaries and the species is known to occur in the project vicinity.
Phrynosoma coronatum frontale coast horned lizard	-- / SSC / --	Associated with open patches of sandy soils in washes, chaparral, scrub, and grasslands.	**High:** Appropriate habitat present within project boundaries; species known to occur on Armstrong Ranch and numerous locations within Fort Ord.
Rana draytonii California red-legged frog	FT / SSC / --	Lowlands and foothills in or near permanent or late-season sources of deep water with dense, shrubby, or emergent riparian vegetation. During late summer or fall adults are known to utilize a variety of upland habitats with leaf litter or mammal burrows.	**Unlikely:** No appropriate habitat present within project boundaries.
Thamnophis hammondii two-striped garter snake	-- / SSC / --	Associated with permanent or semi-permanent bodies of water bordered by dense vegetation in a variety of habitats from sea level to 2400m elevation.	**Unlikely:** No appropriate habitat present within project boundaries.
FISH			

Species	Status (USFWS/ CDFG/ CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Eucyclogobius newberryi tidewater goby	FE / SSC / --	Brackish water habitats, found in shallow lagoons and lower stream reaches.	**Unlikely:** No appropriate habitat present within project boundaries.
Oncorhynchus mykiss irideus south-central coast steelhead	FT / SSC / --	Coastal perennial and near perennial streams, with suitable spawning and rearing habitat and no major barriers.	**Unlikely:** No appropriate habitat present within project boundaries.
INVERTEBRATES			
Coelus globosus globose dune beetle	-- / CNDDB / --	Coastal dunes. These beetles are primarily subterranean, tunneling through sand underneath dune vegetation.	**Unlikely:** No appropriate habitat present within project boundaries.
Danaus plexippus monarch butterfly	-- / CNDDB / --	Coastal California conifer and Eucalyptus groves. In California, the butterflies cluster in these sites from approximately October to February. In the spring they depart, flying north and east throughout North America to search for milkweed plants (*Asclepias* sp.), on which the females lay their eggs.	**Unlikely:** No appropriate habitat present within project boundaries.
Euphilotes enoptes smithi Smith's blue butterfly	FE / -- / --	Most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz Counties. Plant hosts are *Eriogonum latifolium* and *E. parvifolium*.	**Unlikely:** No appropriate habitat present within project boundaries, host plants are not present.
Linderiella occidentalis California linderiella	-- / CNDDB / --	Ephemeral ponds with no flow. Generally associated with hardpans.	**Unlikely:** No appropriate habitat present within project boundaries.
Tryonia imitator California brackishwater snail	-- / CNDDB / --	Inhabits coastal lagoons, estuaries and salt marshes. Found only in permanently submerged areas in a variety of sediment types. Tolerant of a wide range of salinities.	**Unlikely:** No appropriate habitat present within project boundaries, plant hosts not present.
PLANTS			
Allium hickmanii Hickman's onion	-- / -- / 1B	Closed cone coniferous forests, chaparral, coastal prairie, coastal scrub, valley-foothill grasslands; elevation 5-200 meters. Bulbiferous herb in the liliaceae family, blooms March-May.	**Moderate:** Appropriate habitat may occur within the WAPP site, and surveys will be conducted in spring 2009 to determine presence.

Species	Status (USFWS/ CDFG/ CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Arctostaphylos hookeri ssp. *hookeri* Hooker's manzanita	-- / -- / 1B	Closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub/sandy; elevation 85-536 meters. Evergreen shrub in the Ericaceae family, blooms Jan-June.	**Unlikely:** Not observed during the botanical surveys.
Arctostaphylos montereyensis Toro manzanita	-- / -- / 1B	Chaparral, cismontane wilderness, coastal scrub/ sandy; elevation 30-730 meters. Evergreen shrub in the Ericaceae family, blooms February-March.	**Unlikely:** Not observed during the botanical surveys.
Arctostaphylos pajaroensis Pajaro manzanita	-- / -- / 1B	Chaparral on sandy soils; elevation 30-760 meters. Evergreen shrub in the Ericaceae family, blooms December-March.	**Unlikely:** Not observed during the botanical surveys.
Arctostaphylos pumila sandmat manzanita	-- / -- / 1B	Closed-cone coniferous forests, chaparral, cismontane woodland, coastal dunes, coastal scrub/ sandy; elevation 3-205 meters. Evergreen shrub in the Ericaceae family, blooms February-May.	**Present:** Species observed along the alignment near Blackhorse Reservoir.
Astragalus tener var. *tener* alkali milk-vetch	-- / -- / 1B	Playas, valley and foothill grassland (adobe clay) and vernal pools on alkaline soils; elevation 1-60 meters. Annual herb in the Fabaceae family, blooms March-June.	**Unlikely:** Project site lacks suitable habitat. Not observed during the botanical surveys.
Astragalus tener var. *titi* coastal dunes milk-vetch	FE / SE / 1B	Coastal bluff scrub (sandy), coastal dunes, coastal prairie (mesic); elevation 1-50 meters. Annual herb in the Fabaceae family, blooms March-May.	**Unlikely:** Project site lacks suitable habitat. Not observed during the botanical surveys.
Callitropsis goveniana ssp. *goveniana* Gowen cypress	FT / -- / 1B	Closed cone coniferous forest, maritime chaparral; Evergreen tree from the family Cupressaceae; elevation 30-300 meters.	**Unlikely:** Not observed during the botanical surveys.
Callitropsis macrocarpa Monterey cypress	-- / -- / 1B	Closed cone coniferous forest; Evergreen tree from the family Cupressaceae; elevation 10-30 meters. Known from only two native occurrences in the Monterey area; widely planted and naturalized elsewhere.	**Unlikely:** Cypress trees within the project vicinity are planted specimens of unknown genetic origin and therefore non-native and not protected.
Ceanothus cuneatus ssp. *rigidus* Monterey ceanothus	-- / -- / List 4	Closed cone coniferous forest, chaparral, and coastal scrub on sandy soils; elevation 3-200 meters. Evergreen shrub in the Rhamnaceae family, blooms February-April.	**Present:** Species observed along the alignment near Blackhorse Reservoir.

Species	Status (USFWS/ CDFG/ CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Centromadia parryi ssp. *congdonii* Congdon's tarplant	-- / -- / 1B	Valley and foothill grassland on alkaline soils; elevation 1-230 meters. Annual herb in the Asteraceae family, blooms May-November.	**Unlikely:** Project site lacks suitable habitat. Not observed during the botanical surveys.
Chorizanthe pungens var. *pungens* Monterey spineflower	FT / -- / 1B	Chaparral (maritime), cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland/ sandy; elevation 3-450 meters. Annual herb in the Polygonaceae family, blooms April-June.	**Present:** Species observed along the alignment within Armstrong Ranch and near Blackhorse Reservoir.
Chorizanthe robusta var. *robusta* robust spineflower	FE / -- / 1B	Cismontane woodland (openings), coastal dunes, coastal scrub/sandy or gravelly; elevation 3-300 meters. Annual herb in the Polygonaceae family, blooms April-September.	**Unlikely:** Project site lacks suitable habitat. Not observed during the botanical surveys.
Clarkia jolonensis Jolon clarkia	-- / -- / 1B	Cismontane woodland, chaparral, coastal scrub; elevation 20-660 meters. Annual herb in the Onagraceae family, blooms April-June.	**Unlikely:** Project site lacks suitable habitat. Not observed during the botanical surveys.
Collinsia multicolor San Francisco collinsia	-- / -- / 1B	Closed-cone coniferous forest, coastal scrub/sometimes serpentinite; elevation 30-250 meters. Annual herb in the Scrophulariaceae family, blooms March-May.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Cordylanthus rigidus ssp. *littoralis* seaside bird's-beak	-- / SE / 1B	Closed-cone coniferous forests, chaparral, cismontane woodlands, coastal dunes, coastal scrub/sandy, often disturbed sites; elevation 0-215 meters. Annual hemiparasiticsitic herb in the Scrophulariaceae family, blooms May-October.	**Unlikely:** Not observed during the botanical surveys.
Delphinium hutchinsoniae Hutchinson's larkspur	-- / -- / 1B	Broadleaved upland forest, chaparral, coastal scrub, coastal prairie; elevation 0-400 meters. Perennial herb in the Ranunculaceae family, blooms March-June. Known from approximately 10 occurrences.	**Unlikely:** Not observed during the botanical surveys.
Ericameria fasciculata Eastwood's goldenbush	-- / -- / 1B	Sandy openings in closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub; elevation 30-275 meters. Evergreen shrub in the Asteraceae family, blooms July-October.	**Unlikely:** Appropriate habitat within the project site, but species not observed during botanical surveys.
Erysimum ammophilum sand-loving (coast) wallflower	-- / -- / 1B	Chaparral (maritime), coastal dunes, coastal scrub, sandy openings; elevation 0-60 meters. Perennial herb in the Brassicaceae family, blooms February-June.	**Unlikely:** Not observed during the botanical surveys.

Species	Status (USFWS/ CDFG/ CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Erysimum menziesii ssp. *menziesii* Menzies' wallflower	FE / SE / 1B	Coastal dunes; elevation 0-35 meters. Perennial herb in the Brassicaceae family, blooms March-June.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Erysimum menziesii ssp. *yadonii* Yadon's wallflower	FE / SE / 1B	Coastal dunes; elevation 0-10 meters. Perennial herb in the Brassicaceae family, blooms May-September.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Fritillaria liliacea fragrant fritillaria	-- / -- / 1B	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland in heavy clay soil, often serpentinite; elevation 3-410 meters. Perennial herb (bulbiferous), blooms February-April.	**Moderate:** Appropriate habitat may occur within the WAPP site, and surveys will be conducted in spring 2009 to determine presence.
Gilia tenuiflora ssp. *arenaria* sand gilia	FE / ST /1B	Sandy openings of maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub; elevation 0-45 meters. Annual herb in the Polemoniaceae family, blooms April-June	**Moderate:** Appropriate habitat may occur within the WAPP site, and surveys will be conducted in spring 2009 to determine presence.
Holocarpha macradenia Santa Cruz tarplant	FT / SE /1B	Coastal prairies on marine terraces, often clay or sandy soils; elevation 10-220 meters. Annual herb in the Asteraceae family, blooms June-October.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Horkelia cuneata ssp. *sericea* Kellogg's horkelia	-- / -- / 1B	Closed cone coniferous forests, chaparral, (maritime), coastal scrub, sandy or gravelly openings; elevation 10-200 meters. Perennial herb in the Rosaceae family, blooms April-September.	**Unlikely:** Not observed during the botanical surveys.
Lasthenia conjugens Contra Costa goldfields	FE / -- / 1B	Mesic areas of cismontane woodland, valley and foothill grassland, playas, vernal pools on alkaline soils; elevation 0-470 meters. Annual herb in the Asteraceae family, blooms March-June.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Layia carnosa beach layia	FE / SE / 1B	Coastal dunes, coastal scrub, sandy soils; elevation 0-60 meters. Annual herb in the Asteraceae family, blooms March-July.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Lupinus tidestromii Tidestrom's lupine	FE / SE / 1B	Coastal dunes; elevation 0-100 meters. Perennial herb (rhizomatous) in the Fabaceae family, blooms April-June. Only Monterey County plants are state-listed Endangered as var. *tidestromii*.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.

Species	Status (USFWS/ CDFG/ CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Malacothamnus palmeri var. *involucratus* Carmel Valley bush-mallow	-- / -- / 1B	Chaparral, cismontane woodland, coastal scrub; elevation 30-1100 meters. Deciduous shrub in the Malvaceae family, blooms May-October.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Malacothamnus palmeri var. *palmeri* Santa Lucia bush-mallow	-- / -- / 1B	Chaparral; elevation 60-360 meters. Deciduous shrub in the Malvaceae family, blooms May-July.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Malacothrix saxatilis var. *arachnoidea* Carmel Valley malacothrix	-- / -- / 1B	Chaparral and coastal scrub, rocky soils; elevation 25-1036 meters. Rhizomatous herb in the Asteraceae family, blooms June-December (May bloom in March, but uncommon).	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Microseris paludosa marsh microseris	-- / -- / 1B	Closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grasslands; elevation 5-300 meters. Perennial herb in the Asteraceae family, blooms April-June.	**Unlikely:** Not observed during the botanical surveys.
Pinus radiata Monterey pine	-- / -- / 1B	Closed-cone coniferous forest, cismontane woodland; elevation 25-185 meters. Tree (evergreen). Only three native stands in CA, at Ano Nuevo, Cambria, and the Monterey Peninsula; introduced in many areas.	**Unlikely:** Monterey pine trees within the project vicinity are planted specimens of unknown genetic origin and therefore non-native and not protected.
Piperia yadonii Yadon's rein orchid	FE / -- / 1B	Sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral; elevation 10-510 meters. Perennial herb in the Orchidaceae family, blooms May-August.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Potentilla hickmanii Hickman's cinquefoil	FE / SE / 1B	Coastal bluff scrub, closed cone coniferous forests, meadows (vernally mesic), freshwater marshes and swamps; elevation 10-135 meters. Perennial herb in the Rosaceae family, blooms April-August.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Rosa pinetorum pine rose	-- / -- / 1B	Closed-cone coniferous forest; elevation 2-300 meters. Shrub in the Rosaceae family, blooms May-July. Possible hybrid of *R. spithamea*, *R. gymnocarpa*, or others; further study needed.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.

Species	Status (USFWS/ CDFG/ CNPS)	General Habitat	Potential Occurrence within Project Vicinity
Sidalcea malachroides maple-leaved checkerbloom	-- / -- / 4	Broad-leafed upland forest, coastal prairie, coastal scrub, north coast coniferous forest, often in disturbed areas; elevation 2-700 meters. Perennial herb. Blooms: April-August.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Stebbinsoseris decipiens Santa Cruz microseris	-- / -- / 1B	Broadleaved upland forest, close cone coniferous forests, chaparral, coastal prairies, coastal scrub, valley and foothill grasslands, open areas, sometimes serpentinite; elevation 10-500 meters. Annual herb in the Asteraceae family, blooms April-May.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Trifolium buckwestiorum Santa Cruz clover	-- / -- / 1B	Broadleaved upland forest, cismontane woodland, coastal prairie, gravelly margins; elevation 105-610 meters. Annual herb in the Fabaceae family, blooms April-October.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Trifolium depauperatum var. *hydrophilum* saline clover	-- / -- / 1B	Marshes and swamps, valley and foothill grassland (mesic, alkaline soils), vernal pools; elevation 0-300 meters. Annual herb in the Fabaceae family, blooms April-June.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Trifolium polyodon Pacific Grove clover	-- / SR / 1B	Mesic areas in closed-cone coniferous forest, coastal prairie, meadows and seeps, valley and foothill grasslands; elevation 5-120 meters. Annual herb in the Fabaceae family, blooms April-June.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.
Trifolium trichocalyx Monterey clover	FE / SE / 1B	Closed-cone coniferous forest, sandy openings, burned areas; elevation 30-240 meters. Annual herb in the Fabaceae family, blooms April-June.	**Unlikely:** No appropriate habitat present within project boundaries. Not observed during the botanical surveys.

STATUS DEFINITIONS

U.S. Fish and Wildlife Service (USFWS)

FE = listed as Endangered under the federal Endangered Species Act
FT = listed as Threatened under the federal Endangered Species Act
FC = federal Candidate under the federal Endangered Species Act
-- = no listing

California Department of Fish and Game (CDFG)

SE = listed as Endangered under the California Endangered Species Act
ST = listed as Threatened under the California Endangered Species Act

SC = state Candidate under the California Endangered Species Act
SR = listed as Rare under the California Endangered Species Act
SSC = California Department of Fish and Game Species of Special Concern
CFP = California Fully Protected Animal
-- = no listing
CNDDB = This designation is being assigned to animal species that are not assigned any of the other status designations defined in this table. These animal species are included in the CDFG's CNDDB "Special Animals" list (March 2009), which includes all taxa the CNDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special-status species." The CDFG considers the taxa on this list to be those of greatest conservation need.

California Native Plant Society (CNPS)
1B = List 1B species; Rare, Threatened or Endangered in California and elsewhere
2 = List 2 species; Rare, Threatened, or Endangered in California, but more common elsewhere
3 = List 3 species; plants about which more information is needed
4 = List 4 species; plants of limited distribution
-- = no listing

POTENTIAL TO OCCUR
Present = known occurrence of species within the site; presence of suitable habitat conditions; or observed during field surveys.
High = known occurrence of species in the vicinity from the CNDDB or other documentation; presence of suitable habitat conditions.
Moderate = known occurrence of species in the vicinity from the CNDDB or other documentation; presence of marginal habitat conditions within the site.
Low = species known to occur in the vicinity from the CNDDB or other documentation; lack of suitable habitat or poor quality.
Unlikely = species not known to occur in the vicinity from the CNDDB or other documentation, no suitable habitat is present within the site; species was not observed during surveys.

*** = Bold** text indicates Fort Ord HMP species

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY REFER TO:

MP-153
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SPECIAL DELIVERY - FEDEX

Mr. Milford Wayne Donaldson
State Historic Preservation Officer
Office of Historic Preservation
1416 9th Street, Room 1442-7
Sacramento, California 95814

Subject: Compliance with Section 106 of the National Historic Preservation Act for the Marina Coast Water District Regional Urban Recycled Water Project, Monterey County, California (Reclamation #06-SCAO-259)

Dear Mr. Donaldson:

The Bureau of Reclamation is initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) and seeking your concurrence with our finding of no historic properties affected by the proposed construction of a recycled water pipeline (Figure 1). The Salinas Valley Reclamation Project (SVRP) was originally developed to provide recycled water for agricultural purposes and was funded by Reclamation, the State Water Resources Control Board (SWRCB), and the Monterey Regional Water Pollution Control Agency (MRWPCA). In a contract between Reclamation and the MRWPCA, it was stipulated that recycled water for municipal and industrial (M&I) uses could only be delivered after compliance with the National Environmental Policy Act (NEPA) and other Federal regulations. The change from agricultural to M&I recycled water delivery, pursuant to the contract, constitutes an undertaking subject to Section 106 of the NHPA. Reclamation is consulting with your office pursuant to the 36 CFR Part 800 regulations that implement Section 106 of the NHPA.

The Marina Coast Water District (MCWD) is proposing to construct a new distribution system to provide recycled water from the SVRP pump station to urban users in the Cities of Marina, Seaside, Del Rey Oaks, and Monterey County, California. The project entails connecting to the SVRP facility, which involves installing one pump station; installing approximately 127,000 linear feet of 4- to 20-inch-diameter main and lateral pipelines and associated pressure valves and appurtenances; installing one storage tank at an existing MCWD water storage tank site near the intersection of Eucalyptus Road and Parker Flats Cutoff; and constructing a pump station at 3rd Street and 5th Avenue in the City of Marina. Pipeline installation will involve backhoes and other heavy equipment to remove asphalt and concrete, dig trenches, and install pipe. Equipment and materials will be staged and stored within the area of potential effects (APE) or on developed road ways and parking lots adjacent to the APE.

Reclamation has determined that the APE for the pipeline construction is a corridor 50 feet wide and 24 miles long, totaling about 145 acres. The APE is located in unsectioned portions of the City Lands of Monterey and the Noche Buena Land Grants in T. 14 S. and T. 15 S., R. 1 E. and R. 2 E., as depicted on the Marina, Seaside, and Monterey 7.5' USGS quadrangle maps, Mount Diablo Meridian. Most of the APE is located along existing roads in public transportation rights-of-way and urban development within

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the MCWD boundary. A portion of the APE crosses rural land in the City of Marina and will have a maximum width of 50 feet.

The MCWD contracted Denise Duffy and Associates, Incorporated to prepare the EIR/EIS for this project, and Archaeological Consultants was subcontracted to conduct the cultural resources inventory of the APE. Archaeological Consultants conducted a records search at the Northwest Information Center at Sonoma State University in Rohnert Park, California. The entire APE was subsequently surveyed between April 26 and October 6, 2006 and June 8, 2007. Those unpaved areas of the APE were intensively surveyed using linear transects. Exposed soil surfaces within or adjacent to the paved portions of the APE were closely examined for cultural resources. These identification efforts are documented in two reports: *Phase 1 Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, In Marina, Ord Community, Seaside, and Monterey, Monterey County, California* (Doane and Breschini 2007b); and *Phase 1 Archaeological Reconnaissance for Two Additional Alignments for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, In Marina, Monterey County, California* (Doane and Breschini 2007b), which are enclosed for your review. No cultural resources were identified within the APE.

Archaeological Consulting contacted the Native American Heritage Commission to request a search of their Sacred Lands file as well as a list of Native American tribes and individuals who may have an interest in the APE (see Doane and Breschini 2007a:Exhibit A). The contractor subsequently sent consultation letters requesting information regarding the presence of cultural resources within the APE. The Ohlone Costanoan Esselen Nation replied on May 22, 2006, to request they be contacted should any Native American human remains be discovered during project implementation. Reclamation determined that the Native American consultation conducted by Archaeological Consulting is sufficient for Section 106 compliance.

Based on the above findings and enclosed materials, Reclamation concludes that construction of the recycled water pipeline will result in no historic properties affected pursuant to 36 CFR Part 800.4(d)(1). Reclamation requests your concurrence with our delineation of the APE, our efforts to identify historic properties, and our finding that the undertaking will not affect historic properties. Please contact Amy Barnes at 916-978-5047, or abarnes@mp.usbr.gov, if you have any questions regarding the project.

Sincerely,

Sgd Susan M. Fry

Susan M. Fry
Regional Environmental Officer

Enclosures

References:

Doane, Mary and Gary S. Breschini

2007a *Phase 1 Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, In Marina, Ord Community, Seaside, and Monterey, Monterey County, California,* prepared for Marina Coast Water District by Archaeological Consulting, Salinas, California, May 22, 2007

Doane, Mary and Gary S. Breschini
2007b *Phase 1 Archaeological Reconnaissance for Two Additional Alignments for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, In Marina, Monterey County, California,* prepared for Marina Coast Water District by Archaeological Consulting, Salinas, California, September 4, 2007

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06-SCAO-259 CASHPO MCWD Recycled Water.doc

OFFICE OF HISTORIC PRESERVATION
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March 24, 2008

In Reply Refer To: BUR080313B

Susan M. Fry
Regional Environmental Officer
United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

Re: Marina Coast Water District Regional Urban Recycled Water Project, Monterey County, California (Project No. 06-SCAO-259).

Dear Ms. Fry:

Thank you for consulting with me regarding the above noted undertaking. Pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act (NHPA), the Bureau of Reclamation (BUR) is the lead federal agency for this undertaking and is seeking my comments on the effects that the proposed project will have on historic properties. The Marina Coast Water District (MCWD) is proposing to construct a new distribution system (pipeline) to provide recycled water from the Salinas Valley Reclamation Project (SVRP) for urban use in the cities of Marina, Seaside, Del Rey Oaks, and Monterey, Monterey County, California. A contract between the BUR and the MCWD stipulates that recycled water can only be delivered after compliance with the National Environmental Policy Act (NEPA) and other federal regulations. The MCWD is proposing a change from agricultural use to municipal and industrial recycled water use. Accordingly, the BUR has identified this action as an undertaking pursuant to 106 of the NHPA.

The proposed undertaking will consist of the construction of two pump stations and one storage tank and the installation of approximately 127,000 linear feet of buried 4-inch to 20-inch diameter pipelines and laterals. The BUR has determined that the area of potential effects (APE) consists of a linear corridor along the proposed pipeline routes 50 feet in width and approximately 24 miles in length, totaling approximately 145 acres. The majority of this route is under existing roadways in public transportation right-of-ways and developed urban areas within the MCWD boundary.

In addition to your letter of March 11, 2008, you have submitted the following documents as evidence of your efforts to identify historic properties in the project APE:

- *Phase I Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, in Marina, Ord Community, Seaside, and Monterey, Monterey County, California* (M. Doane and G.S. Breschini; Archaeological Consulting: October 30, 2006, Revised May 22, 2007).

- *Phase I Archaeological Reconnaissance for Two Additional Alignments for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, in Marina, Monterey County, California* (M. Doane and G.S. Breschini; Archaeological Consulting: September 4, 2007).

Based on these identification efforts, the BUR has determined that a finding of No Historic Properties Affected is appropriate pursuant to 36 CFR Part 800.4(d)(1). After reviewing your letter of March 11, 2008 and supporting documentation, I have no objection to this finding. Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the BUR may have additional future responsibilities for this undertaking under 36 CFR Part 800.

Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact William Soule, Associate State Archeologist, at phone 916-654-4614 or email wsoule@parks.ca.gov.

Sincerely,

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer